

Published every Saturday by the
Simmons-Boardman Publishing
Corporation, 1309 Noble Street,
Philadelphia, Pa., with editorial
and executive offices: 30 Church
Street, New York, N. Y., and 105
West Adams Street, Chicago, Ill.

SAMUEL O. DUNN, *Chairman of Board*
HENRY LEE, *President*
LUCIUS B. SHERMAN, *Vice-Pres.*
ROY V. WRIGHT, *Vice-Pres. and Sec.*
FREDERICK H. THOMPSON, *Vice-Pres.*
ELMER T. HOWSON, *Vice-Pres.*
F. C. KOCH, *Vice-Pres.*
ROBERT E. THAYER, *Vice-Pres.*
H. A. MORRISON, *Vice-Pres.*
JOHN T. DEMOTT, *Treas.*

CLEVELAND
Terminal Tower

WASHINGTON
1081 National Press Building

SEATTLE
1038 Henry Building

SAN FRANCISCO
485 California Street

LOS ANGELES
530 West 6th Street

Editorial Staff

SAMUEL O. DUNN, *Editor*
ROY V. WRIGHT, *Managing Editor*
ELMER T. HOWSON, *Western Editor*
JAMES G. LYNE, *Assistant to Editor*

C. B. PECK
ALFRED G. OEHLER
F. W. KRAEGER
E. L. WOODWARD
J. H. DUNN
D. A. STEEL
R. A. DOSTER
H. C. WILCOX
NEAL D. HOWARD
CHARLES LAYNG
GEORGE E. BOYD
WALTER J. TAFT
M. H. DICK
E. J. PHILLIPS
JOHN H. KING
W. H. SCHMIDT
JOHN S. VREELAND

The *Railway Age* is a member of
the *Associated Business Papers (A.
B. P.)* and of the *Audit Bureau of
Circulations (A. B. C.)*.

Subscriptions, including 52 regular
weekly issues, and special daily edi-
tions published from time to time
in New York, or in places other
than New York, payable in advance
and postage free. United States,
U. S. possessions and Canada: 1
year, \$6.00; 2 years, \$10.00; foreign
countries, not including daily edi-
tions: 1 year, \$8.00; 2 years, \$14.00.

Single copies, 25 cents each.

H. E. McCandless, Circulation
Manager, 30 Church St., New York,
N. Y.

Railway Age

With which are incorporated the *Railway Review*, the *Railroad Gazette*
and the *Railway Age-Gazette*. Name registered U. S. Patent Office.

Vol. 106

May 13, 1939

No. 19

In This Issue

Signaling for a Train a Minute on San Francisco Bridge Page 818

An article describing how continuous control of train speeds on the main span
and the use of route interlockings at each terminal has provided a 63.5-second
headway.

Long Island Gets Modernistic Station at World's Fair 823

A description of the structure built to handle the shuttle business from and
to New York, incorporating many unusual architectural features.

Working the Iron Horse 830

A discussion by A. A. Raymond, Superintendent of Fuel and Locomotive Per-
formance for the New York Central, of the vital factors in converting 90
per cent availability into maximum utilization.

EDITORIALS

The U. S. Chamber Versus the Railroads.....	815
Travel by Rail and Bus.....	817

GENERAL ARTICLES

What Will the Traffic Bear?—13.....	817
Signaling for a Train a Minute on San Francisco Bridge.....	818
Long Island Gets Modernistic Station at World's Fair.....	823
Carl R. Gray Dies at 71.....	827
Rail-Highway Co-ordination Brings Business, by G. W. Frink.....	828
Working the Iron Horse, by A. A. Raymond.....	830
Senate Committee Votes to Report Wheeler-Truman "Key Bill".....	834
Hearings Continue on Railroad Reorganization Bills.....	836
Railways Largest Buyers in Canada.....	839

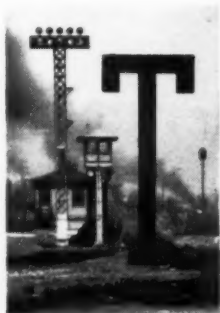
NEW BOOKS 841

NEWS 842

The *Railway Age* is indexed by the *Industrial Arts Index* and also by the
Engineering Index Service

CAR RETARDERS

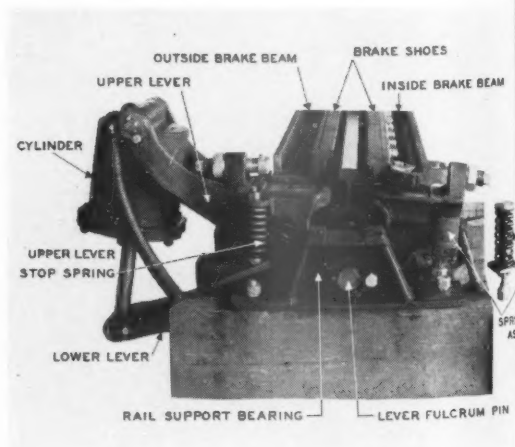
*Materially reduce the
Cost of Yard Operation*



THIS has been proved by many installations throughout the country. A study made by the A. A. R. Signal Section has shown that returns of from 7 to 67 per cent on the investment have been made, with an average return of 42 per cent on 16 installations. In addition to large economies in the retarder equipped yards, car retarders have reduced switching at other yards; and

remember that a portion of these savings was effected in yards where part-time operation took care of the traffic.

The "UNION" Model 31 Electro-Pneumatic Car Retarder, now available, is an improvement even over those retarders resulting in the above economies. Shall we furnish details?



UNION SWITCH & SIGNAL COMPANY
SWISSVALE, PA.



NEW YORK

CHICAGO

ST. LOUIS

SAN FRANCISCO

The U. S. Chamber Versus the Railroads

This paper occasionally has emphasized that if and when private enterprise—otherwise called “capitalism”—is destroyed it will be as much an inside job by selfish or economically-ignorant business leaders as an outside job by radicals. Why this will be true was well illustrated at the annual meeting of the Chamber of Commerce of the United States in Washington last week.

This organization pretends to represent all business. Day after day in speeches and resolutions the participants in its meeting denounced New Deal policies for attacking private enterprise and protracting the depression. And then it approved a report by its Transportation Conference evading and ignoring the issues squarely presented by prevailing government policies that, by unfairly discriminating against the railroads in favor of competing carriers, are recklessly driving the railroads toward government ownership.

The railroads still carry two-thirds of the country's commerce. Largely because of these unfairly discriminatory government policies they are in a condition that retards recovery and menaces our entire system of private enterprise. Certain special Big Business interests are benefiting, at least temporarily, by these government policies. But they are benefiting by them at the expense not only of the railroads, but of other Big Business interests, of small business, and of all the country's taxpayers. The Chamber of Commerce of the United States, under the domination of the specially favored Big Business interests, ignored the claims and rights of everybody else, and refused to go on record in favor of a government transportation policy fair to all concerned. It was a hypocritical and cowardly exhibition that forfeited all claim of the Chamber to represent business as a whole.

No Sound Principles for Transportation

Readers who desire to know what occurred should read the article entitled “U. S. C. of C. Hears Talks on Transport,” which, beginning on page 789 of the *Railway Age* of May 6, gave a good summary of what was said in the round-table discussion. The discussion was followed by adoption of a resolution regarding the recommendations of the Chamber's Transportation Conference saying, “We approve the proposed measures as a limited program appropriate for immediate enact-

ment. Additional measures of remedial railroad legislation, and the necessary factual information on which to base them, should be the subject of thorough investigation with full opportunity for all interests to be heard.”

The recommendations of the Transportation Conference endorsed by this resolution are briefly summarized elsewhere in this issue. The most outstanding fact regarding them is that they even refrain from declaring in favor of any *principles* upon which future government transportation policies should be based. Should the rates of all competing carriers be regulated alike and by the same body or bodies? The recommendations do not say. Should there be adopted a broadened “commodities clause” which would prohibit all other carriers, as well as the railways, from owning, buying and selling commodities that they transport? The recommendations do not say. Should government-subsidized competition be abolished in transportation, as business demands that it shall be in every other industry? The recommendations say nothing about it. Should reductions of huge and wasteful government expenditures to promote economically indefensible waterway and highway competition with the railways be reduced, along with other huge and wasteful government expenditures that the Chamber demands shall be reduced in order to balance government budgets and make possible reductions of taxes? The recommendations say nothing about that, either.

How Dumb is the “Business Community”?

Surely both the Transportation Conference and the Chamber should have gone on record regarding at least the *principles* that should control government transportation policies as well as other government policies affecting business. But, no. The special Big Business interests that are enabled by present policies to exploit small business, most of Big Business, the railroads and the American taxpayer did not, for obvious reasons, want any such principles declared; and they won like Johnstown won the Kentucky Derby.

In the round-table discussion a Boston banker who was a member of the Transportation Conference said there were men there “who believe that the solution of the railroad problem requires a new approach which would involve measures of a radical character. But the

comparatively slight impression made upon the Conference by all proposals of such a nature must have brought home to those who hold such views how unprepared is the public opinion of the business community, and how much education must be carried on, before there is any possibility of passing legislation of such fundamental character." The present railroad problem is due to developments that have been discussed for thirty years, and to increasing government aid to competitors of the railways that has been discussed before and by business organizations for more than a decade. What kind of a commentary, then, was the Boston banker's statement upon the intelligence and fairness of the "business community?" And how long, at the same rate of progress, does the "business community" believe it will take to educate the entire public regarding the policies necessary to saving private enterprise as a whole and restoring prosperity, if the rest of the public is as unfair and dumb as the Boston banker implied the "business community" is?

"Sympathy" for the Railroads, But—

Chairman Day of the National Industrial Traffic League's executive committee opposed recodification of the Interstate Commerce Act because there is a "very definite impression in some quarters that one of the aims of the proponents of recodification is to control the physical supply of transportation by restricting and discouraging the development and operation of both contract and common carriers on the highways and waterways." Well, why not "control," "restrict" and "discourage" if it is in the public interest to do so? The "shippers," he added, oppose this, although they are likewise opposed to the "promotion by artificial stimulants of any mode of transportation which cannot be self-supporting under fair and reasonable conditions." These statements sound like those of Mr. Facing-Both-Ways. But when did the traffic managers of Big Business, for whom Mr. Day actually spoke, become the "shippers" of the country? And as for these traffic managers, everybody familiar with their policies knows that most of them do favor "the promotion by artificial stimulants of any mode of transportation" that they believe will help them to make a better "showing" in getting freight rates, and this regardless of the effects upon the railroads and small business, and upon the taxes that everybody must pay, including those of their own employers.

H. D. Horton, president of a truck line, and Frank J. Taylor, president of the American Merchant Marine Institute, also opposed recodification of the Interstate Commerce Act. The truckers, Mr. Horton said, "feel sympathetic with the problem of the railroads and will support reasonable measures to improve their situation. But we strenuously object to legislation * * * which is designed to burden competitive transportation in order to throw some little traffic back to the railroads." Likewise, Mr. Taylor said that "the non-rail carriers

were sympathetic to the railroad problem," but "we do not propose to be the carcass for the expected feast. It strikes us as too late a date to turn the calendar back. It would be a strange national policy to seek to help the railroads at the expense of the water carrier, the shipper and the national needs for defense."

"Private Ownership Must Be Saved"—And How!

Thus the railroads got a lot of "sympathy" from everybody—even their government-aided competitors! And that is about all they got. But not quite all. The Chamber unanimously endorsed the Transportation Conference's "objectives" of "preservation of private ownership and operation; strengthening of carrier credit; avoidance of political rate-making; removal of obstacles to voluntary railroad consolidations"—and even "relief from certain unfair burdens and restrictions." Sure! We must "preserve private ownership" and "strengthen carrier credit." But how? Not by policies that will contribute substantially toward these ends. Not by policies based upon sound economic principles. To have declared for them would have been offensive to Big Business interests benefiting, and rapacious to continue benefiting, by transportation policies violating every principle of the sound economics which the United States Chamber of Commerce and the National Association of Manufacturers, in the literature they are disseminating, urge the American people to espouse and support for the salvation of private enterprise. Will the hope of these Big Business interests be realized, that the public will prove so feeble-minded as not to detect the hypocritical inconsistency between the general policies they pretend to advocate and the specific policies they actually do support entirely according to which they believe will best serve their own special purposes, regardless of the effects on everybody else?

Enemies No. 1 and No. 2

The radicals who advocate for all industries such government policies as those of the New Deal are only Enemy No. 2 of private ownership of railways. Enemy No. 1 is the hypocrites of Big Business who last week dictated the indorsement by the U. S. Chamber of Commerce of the recommendations of its Transportation Conference deliberately evading the real issues in the struggle over government transportation policies. Enemy No. 2 is less dangerous because many radicals honestly avow that they are seeking government ownership. Doubtless the two enemies will continue to collaborate closely. But, fortunately, their collaboration does not make the case of the railroads hopeless. The railroads can still appeal to the American taxpayer, to small business, to the farmers and to that large part of Big Business which has enough fairness and brains to realize the danger to private enterprise presented by the collaboration of these two enemies of private ownership. And

they can and should appeal especially to the 2,000,000 individual owners of railroad securities the value of whose investment these two enemies are, with different motives, trying to destroy.

Meantime this paper could stand fewer emanations in future from the Chamber of Commerce of the United States unctuously declaring its courageous and undying devotion to private enterprise in general and private ownership of railways in particular, and its support of all economically sound principles and policies.

Travel by Rail and Bus

Comparative statistics of bus travel are now available for the first time, and they present an interesting and informative picture when compared with rail travel statistics. Since last August the Interstate Commerce Commission has secured accurate reports of passengers and revenues from the bus lines and has set up a group of Class 1 bus operators that includes companies whose revenues amount to more than \$100,000 a year, and whose average revenue per passenger exceeds 20 cents. In this way local and suburban operators are eliminated, and a fairly accurate comparison of intercity travel by rail and bus can be made by eliminating commutation passengers from railway statistics.

In the last five months of 1938 the railways handled 87,437,942 passengers and the bus operators 60,718,094 passengers, or 41 per cent as many as the railways. But the railways earned \$152,724,945 in passenger revenue, while the bus operators with an average revenue of 82 cents per passenger, earned only \$50,206,000. The latter, therefore, while handling seven-tenths as many passengers, received less than one-third as much revenue, the total revenue from all passengers carried being divided 76 per cent for the railways and 24 per cent for the buses.

Moreover, the railways have a large interest in the bus business. After eliminating all train-connection, scenic tour and suburban bus services owned by the railways, it is found that bus subsidiaries owned outright by the railways or controlled by a railway stock ownership of more than 50 per cent, carried 20,376,335 passengers, or 33.5 per cent of the total of 60,718,094 handled by bus. The railway subsidiaries also earned an average of \$1.12 per passenger handled, as compared with 82 cents for all buses, their share of the total bus passenger revenue being \$22,929,516, or 45 per cent of the total of \$50,206,032.

To summarize: During the last five months of 1938 intercity passengers on public vehicles spent \$202,930,977 in train and bus fares, of which the railways and their bus subsidiaries received \$175,654,461, or 86.5 per cent.

What Will the Traffic Bear?—13

Motor trucks are handling minimum 10,000-lb. loads of canned or preserved foodstuffs from Traverse City, Mich., to Chicago at 33 cents per 100 lb. This gives them \$33 for a 324-mile haul—the average cost of which is \$71.42, according to evidence in the Central Territory Case (M. C. 21).

If these trucks can get enough to load a 20,000-

being 1 cent higher per 100 lb. In addition, the trucks are giving free pick-up and delivery.

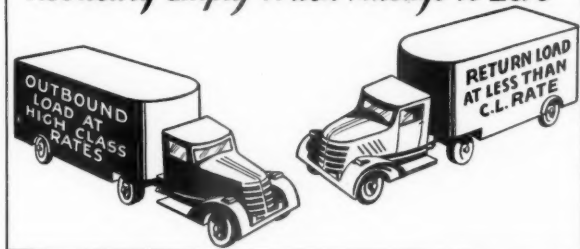
How are the trucks able to do this? It is very simple. The rail class rate on first class traffic is \$1 per 100 lb., and approximates 70 cents per 100 lb. on the average loadings of less-than-carload traffic, but it is only possible to secure merchandise loadings in one direction—from Chicago to Traverse City. The trucks first pick all the first class traffic they can find that will load heavily and, if they can get a full load of such traffic, they will obtain \$200 in revenue for a round-trip that costs them \$166 to make.

If railroad rates were based on costs, then the trucks could charge not more than \$140 for this trip, which would cost them \$166 to make.

Of course, even then the truck could continue to bid for return loads of canned goods, as they are now doing, and obtain revenue somewhere near their costs. But they could not do this if the railroads would awaken to the situation, base their own competitive rates on cost and then insist that the regulating authorities require the trucks to make rates which would give them only that traffic which they are economically suited to handle.

By continuous searching out of return loads, some truck operators now have almost perfect loaded movements in both directions.

How the Present Rate Structure is Reducing Empty Truck Mileage to Zero



lb. minimum, they will charge 25 cents. If they are able to get such a load it will earn them \$50, but the average cost of producing the service will be \$76.42.

The trucks in this instance are making a lower rate for 20,000-lb. loadings than the railroads are making for a 36,000-lb. loading—the railroad rate



General View Showing in the Foreground the Loop and the San Francisco Terminal, With Tracks on Elevated Structure Extending to the Lower Deck of the West End of the Bridge, and Also Showing the Bridge Extending to Yerba Buena Island, Where the Golden Gate International Exposition is Located, and on to Oakland Mole

Signaling for a Train a Minute on San Francisco Bridge

Continuous control of train speeds on the main span and the use of route interlockings at each terminal provide 63.5-second headway

THE special problems of track capacity on the two tracks of the new 4.5-mile San Francisco-Oakland Bay Bridge were solved by the use of recently-developed train-describer systems, cab signaling and train control with suppressed braking to eliminate overlaps, and NX interlockings rather than lever control plants.

San Francisco is located on the west side and Oakland on the east side of San Francisco Bay, the distance between the ferry piers of the two cities being slightly over three miles. Oakland has a population of 284,063*, and three adjacent suburbs, Berkeley, Alameda and Piedmont, having a total population of 126,475*. Many of the people who live in Oakland and the adjacent suburbs work in San Francisco, and, therefore, commute daily. The Key System operates electrically-propelled, multiple-unit cars on various lines serving Oakland and Berkeley. These lines formerly terminated at a ferry slip on a mole extending into the bay from the Oakland side, and passengers were handled between Oakland mole and San Francisco by ferry boats. The Interurban Electric rail-

way, a subsidiary of the Southern Pacific, also operates suburban lines serving some sections of Oakland and Berkeley. These lines formerly terminated on the Southern Pacific mole at Oakland, and interurban passengers were handled to and from San Francisco by Southern Pacific ferry boats. The Sacramento Northern, which operates a suburban line to the north out of Oakland, used the tracks and ferries of the Key System. On the average week day, about 40,000 interurban passengers travel in each direction between San Francisco and Oakland. The passengers of these three interurban lines no longer use the ferries, because the multiple-unit electric cars are now operated over the new bridge directly into a new terminal in San Francisco.

From the San Francisco interlocking limits at the west end of the main bridge structure on Rincon hill to Yerba Buena island, the distance is 11,400 ft., and between the island anchorage and the Oakland interlocking limits at the east end of the main structure, the distance is 12,400 ft. Thus the total length of the main double-deck structure, which is also the length between interlocking plants, is 4.5 miles. The upper deck of the bridge has six lanes

* By 1930 census.

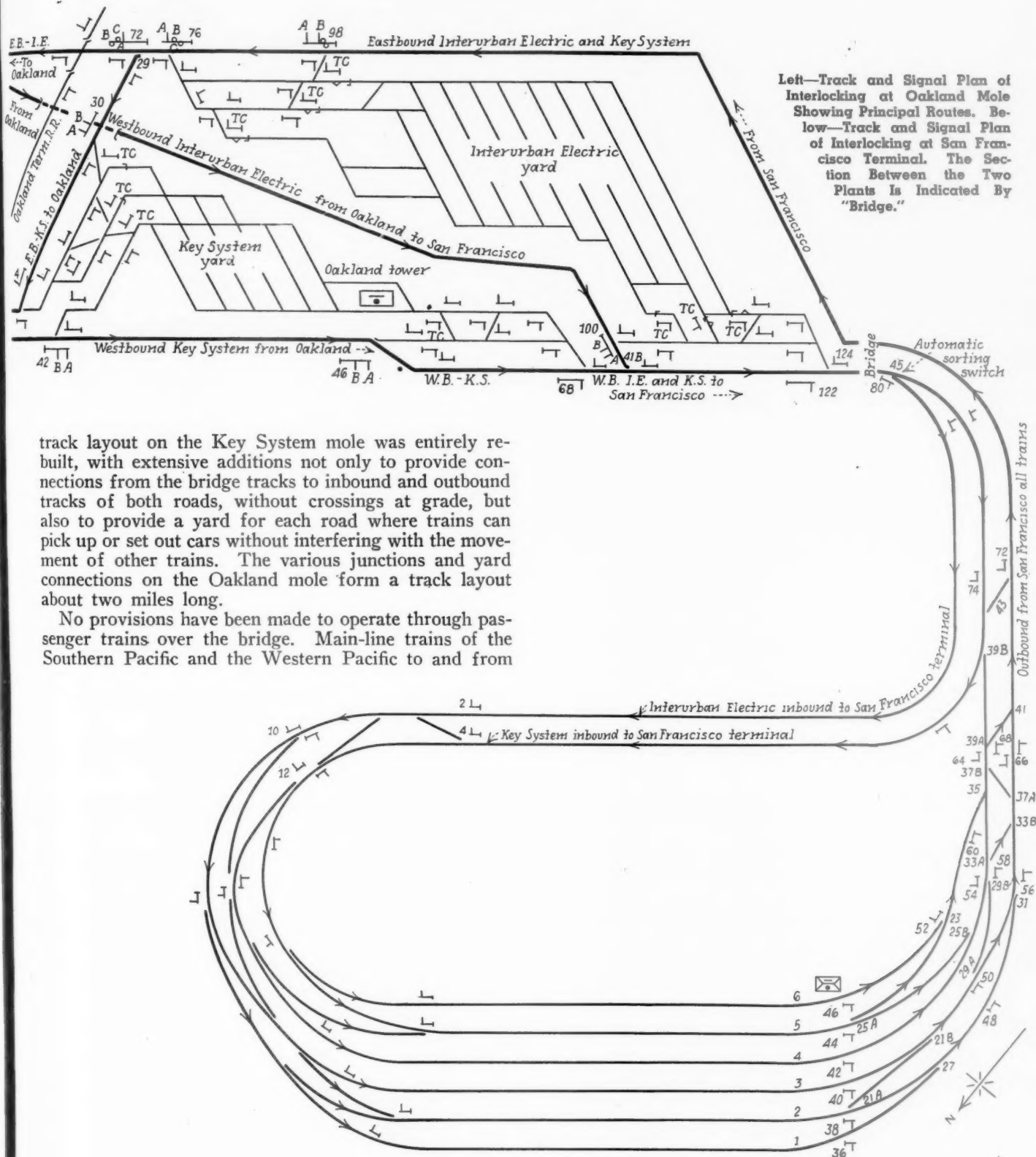
for passenger automobiles, while the lower deck has three lanes for trucks and buses, and two tracks equipped for electrical propulsion on which the interurban cars are operated.

The new installation of tracks in San Francisco, including the terminal, is elevated on a structure above street level. From the end of the bridge, the two tracks curve to the north, and, together with a third track, form a large loop with a six-track, double-end station on the north side of the loop.

At the Oakland end of the Bay bridge, the existing

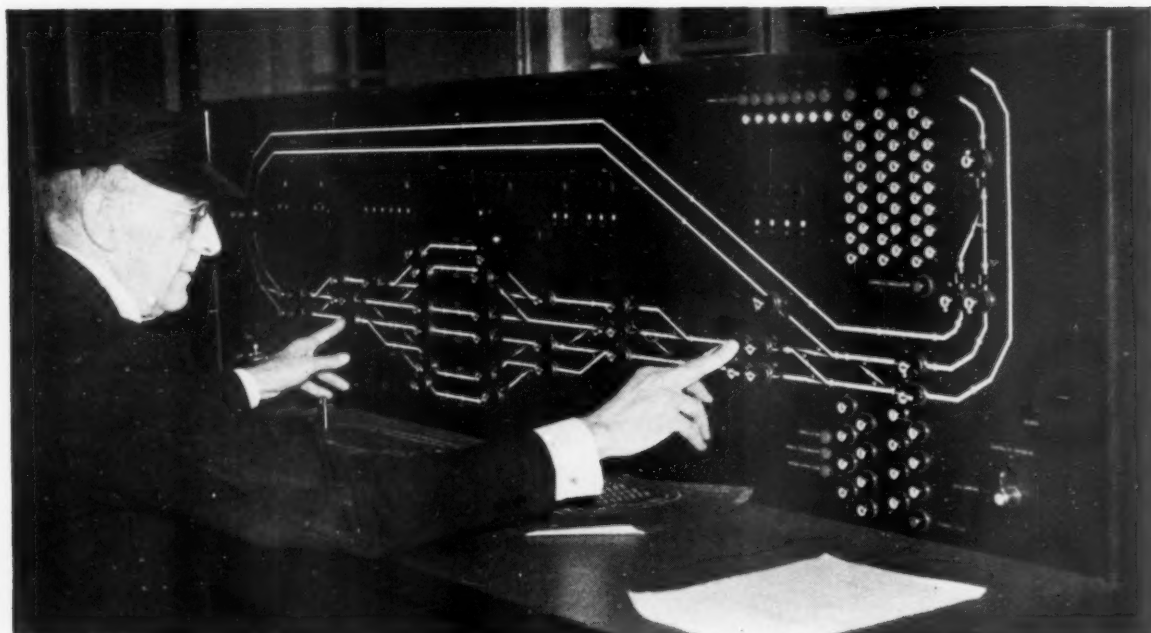
points east are terminated at the Oakland mole, as formerly, and passengers, baggage, mail and express are still handled by ferry boat to and from San Francisco.

A total of 520 scheduled electric trains run into and out of the San Francisco terminal each week day. Each set of Key System articulated units seats 134 people, and each Interurban Electric car seats 116 people. Suburban trains comprise from 1 to 10 cars, or 1 to 7 articulated units. In order to provide a seat for each of the 17,000 people who must be handled in one direction in or out of San Francisco in a 20-min. period, it is neces-



track layout on the Key System mole was entirely rebuilt, with extensive additions not only to provide connections from the bridge tracks to inbound and outbound tracks of both roads, without crossings at grade, but also to provide a yard for each road where trains can pick up or set out cars without interfering with the movement of other trains. The various junctions and yard connections on the Oakland mole form a track layout about two miles long.

No provisions have been made to operate through passenger trains over the bridge. Main-line trains of the Southern Pacific and the Western Pacific to and from



Operator at Control Panel at San Francisco Showing Method of Operating the Entrance and Exit Buttons to Line Up Routes in the Interlocking Limits

sary to operate 16 trains, each consisting of 10 cars or 7 articulated units, on a 75-sec. headway. To allow for irregularities and increases in traffic, the specifications to which the signal system was designed called for facilities to operate 10-car trains, each 780 ft. long, at a 63.5-sec. headway, at running speeds up to 35 m.p.h.

Why Train Control and Cab Signaling Was Used

A study of speed-time-distance curves covering the bridge railway operation showed that it was not possible to obtain the specified headway for full length trains with a system of wayside signals and trip stops. This is true even with very closely spaced signals and with wayside time-element control of the signals on the down grades, the headway limitations being due to the length of overlap required for safe operation of trains at 35 m.p.h. on the down grades.

In order to obtain the required headway, a system of continuous cab signals with suppressed braking and speed control was installed. This arrangement requires the motorman to make a service brake application as the train approaches a restrictive block, (if running over the restrictive speed limit), and eliminates the use of the overlap; thus making it possible to obtain the required headway on the down grades. At the same time, the speed governor on the car permits continuous control of train speed, depending upon the distance to the preceding train.

The cab signaling and train control on the cars is controlled by coded impulses superimposed on the rails ahead of a train. These impulses are picked up inductively, amplified and decoded by relays and tuned transformers to accomplish selection of the different cab signal aspects and speed controls.

In the block occupied by the rear end of a train, and in an area or "block" which may consist of one or more track circuits immediately in the rear of that occupied, a "no code" condition is set up and a train entering there will receive a "Red 11" cab signal indication and an 11 m.p.h. speed restriction. In the "Yellow 17" area, which likewise may consist of one or more track circuits, a train entering in the direction of traffic will receive a coded current of 75 interruptions per minute. In the "Yellow-Green 25" area, the code received will be 120 per minute. In the "clear" blocks in the rear of the "YG25," a

train operating in the direction of traffic will receive a coded current of 180 interruptions per minute, resulting in a "Green 35" aspect of the cab signal and a corresponding speed control.

The System in Operation

The cab signal lamp (second from the bottom) which has a white lens and no figures, is lighted when a train is running at or above the maximum speed permitted by one of the colored aspects. If the speed should rise a mile above the authorized speed, an audible signal is sounded. When a motorman on Key System and Sacramento Northern cars receives this warning, he must take action to prevent further increase in train speed. If he does not take this action and the speed continues to increase, an automatic emergency application of the brakes is made and the power is cut off when the train speed reaches one mile above that at which the audible signal sounds. On the Interurban Electric cars, when the audible signal is sounded, indicating that the train is running one mile above the authorized speed limit, the power is automatically shut off, and, if the motorman does not place his brake valve handle in the full service position within $2\frac{1}{2}$ sec., an emergency brake application is made automatically.

Each time the aspect of the cab signal is changed to one more restrictive, the audible indication is given, and the motorman has $2\frac{1}{2}$ sec. to suppress, i. e., shut off power and initiate a service brake application. If he is running below the new speed limit, no audible indication is given and he takes no action. When a "Red 11" is received, an additional distinctive signal is sounded, and the motorman is required to press an acknowledgment lever within $2\frac{1}{2}$ sec., or before moving the brake handle from the full service position.

In order to determine the length and location of track circuits and speed zone controls throughout the bridge tracks, speed-time-distance curves were prepared to indicate the operation of loaded trains on all sections of these tracks. Based on these curves and the headway requirement of 63.5 sec. for the maximum speed of 35 m. p. h., the track circuit locations and zone controls were laid out to provide service-braking distances at all times between moving trains, with a margin of 25 per cent. On the 3 per cent ascending grades, track circuits



The Cab Signal Is Mounted Alongside the Motorman's Position

are about 370 ft. long, while on descending grades of 2.74 and 3 per cent, where the speed limit is 35 m. p. h., track circuits are approximately 500 ft. long. Near the west end of the bridge, where the westbound trains, when descending the 3 per cent grade, are reducing speed on account of the curve, the track circuits are about 250 ft. long.

The distinctive feature of the system is that the occupancy of any one track circuit establishes the location and length of the three successive speed zones to the rear of the train. Thus, as a train proceeds, the controls are established for three speed zones to the rear, and these zones may vary in length or the total length of the three may vary, depending on whether the track is on an ascending or a descending grade. In effect, the protection moves along behind the train in short jumps of 250 to 500 ft. each.

Although wayside automatic block signals are not used on the bridge, operative wayside signals are, of course, used as interlocking signals to mark the locations at which trains may be required to stop, and also to indicate to motormen that routes are lined up. In-so-far as the automatic train control is concerned, with reference to the wayside interlocking signals, if a wayside signal displays yellow or green, the cab signal indication is determined entirely by the train spacing on the route set up. If the wayside signal displays red, then a succession of speed restrictions will be set up in the cab as the train approaches this wayside signal, culminating in a "Red 11" on the track circuit or circuits immediately in the rear of the stop signal. These approach restrictions are determined by braking distances as though a train were standing on the track circuit immediately in advance of the red wayside signal.

Eliminating Congestion at Terminals

Assuming that one track can handle 18 trains in 20 min. past any one point on the bridge where the maxi-

mum speed is 35 m. p. h., the next question was how to get these trains out of the way of one another as the speed is necessarily reduced when a train is negotiating the curves and being brought to a stop on the station tracks in San Francisco. This problem was solved by the addition of the third track from the switch on Rincon hill north and around the loop to the throat of the station, thus providing double the capacity of one track in this section. The Key System and Sacramento Northern trains are routed over the center track, and Interurban Electric trains are diverted at switch 45 to the third track.

As all trains start from the station and encounter the same curves and grade on the way to the bridge, one outbound track is adequate, in contrast with two inbound tracks. It should be noted, however, that the track layout is so designed that two tracks can be used over a certain distance for outbound trains. As a general rule, each train is scheduled to make a five-minute station stop at San Francisco to unload and load passengers.

The departure of every train from San Francisco is scheduled to the second. Between 4:50 p. m. and 6 p. m., a train departs every 75 sec.

The rapidity with which line-ups must be changed at this plant was considered by the Bay Bridge engineers as being beyond the limits of practicable operation with the use of the lever-type of interlocking machine in which each switch, crossover and signal is controlled by a separate lever. For this reason, route-control interlocking was installed, by means of which the switches, crossovers and signals in a route are lined up within a period of a few seconds merely by pushing one button at the point on the diagram representing the entrance to a route and then pushing a second button representing the exit of the route. With this type of machine, the towerman can not only line the routes for departing trains at the rate of one every 63.5 sec., but also may line the routes for trains coming in at the east end of the station layout at the same spacing.

This track layout at San Francisco, including 10 single switches, 13 crossovers and 40 signals, is controlled by an installation of the General Railway Signal Company's NX electric interlocking system.

Layout at Oakland

At Oakland, neither westbound nor eastbound trains stop to pick up cars during the rush periods, and, there-



A Train on the Bridge. Note the Letter "A" Marker on End

fore, the trains in the direction of the preponderance of traffic move through at maximum speed. For this reason, the operating problem is confined to the operation of the junction crossover No. 41, junction switch No. 29, and the signals governing these movements. In the morning, while the rush of westbound traffic is gradually reducing, the eastbound trains are setting out cars, and, likewise, in the late afternoon westbound trains pick up cars while the eastbound rush of traffic is increasing through Oakland. Thus, the towerman at Oakland has different types of line-ups to handle in rapid sequence. This Oakland layout, including 14 single switches, 11 crossovers and 62 signals, is controlled by a second installation of the General Railway Signal Company's NX interlocking system.

The Train-Describer System

When arriving at San Francisco, the Interurban Electric trains must be routed to the three station tracks on the north side, and the Key System and Sacramento Northern trains to the other three tracks. Likewise, at Oakland yard, the trains must be sorted and diverted to separate routes. The leverman at each interlocking must, therefore, be informed as to the identity of each train before it arrives within his view. To provide this advance information, a train-describer system was designed and developed especially to fit the operating conditions encountered in this installation.

Each Key System and Sacramento Northern car is marked on the front end with a large-sized letter, A, B, C, etc., which designates the route in Oakland or Berkeley which this train serves. Each Interurban Electric train is marked with a numeral 1, 2, 3, etc. The indicator lamps, for receiving the descriptions of trains, and the combination indicator and push buttons for transmitting descriptions, are arranged in groups in the face of the panel of the NX interlocking machines.

When the towerman at Oakland is about to send train "A" to San Francisco, he presses his train-describer push button "A" on his control panel, at which time the lamp behind the center of this button is illuminated. Operation of the train description sending button acts also as the equivalent of the exit button to complete the route line-up. As the train leaves the Oakland interlocking, the "A" description is automatically transmitted by coded electrical impulses over two wires to San Francisco. This causes the lamp in the Oakland push button to be extinguished and at the same time lights the "A" train-describer lamp in the first row at the right at San Francisco.

When train "A" approaches the San Francisco interlocking, its arrival is indicated by the illumination of the approach track light on the track diagram. As the train enters the interlocking, the "A" light in the train-describer is extinguished. The train-describer arrangement has enough lights to indicate 15 trains enroute in each direction.

Automatic Sorting at San Francisco

As the train come from the San Francisco end of the bridge, the Interurban Electric trains, which carry numbered markers, are diverted at switch No. 45 to the third track and Key System or Sacramento Northern cars, which carry lettered markers, continue on the center track. The control of this switch is included as a part of the NX interlocking system and can be so controlled, but the towerman, by operating a special lever at the lower right of the panel, can place the control of switch No. 45 and signal No. 80 on "automatic sort-

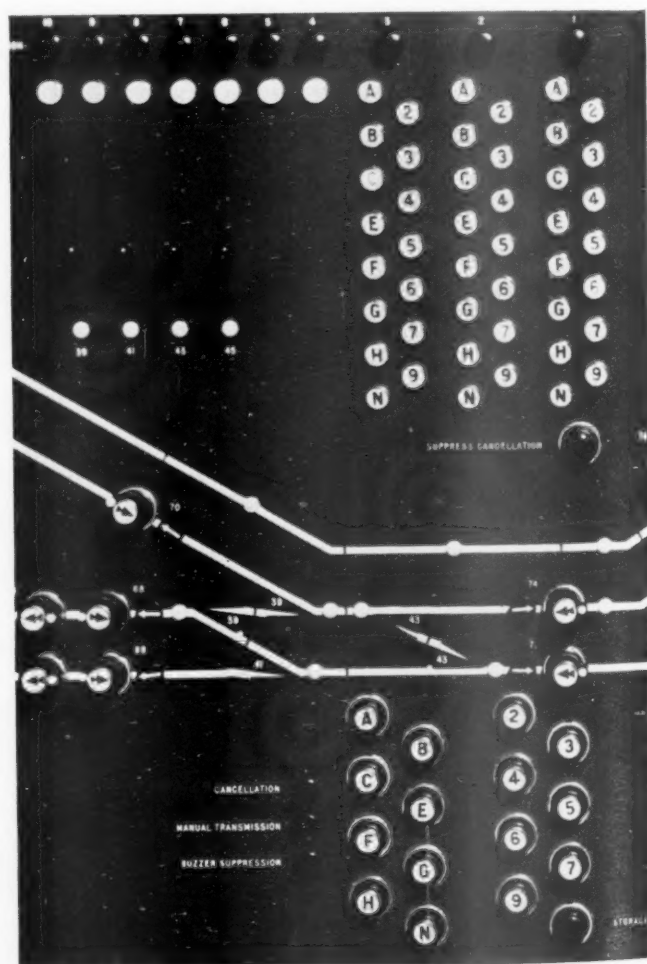
ing," a feature operated by the train-describer system. If the description set up for the next arriving train is a "number" description, switch No. 45 will be reversed to divert the train to the outer loop track and the signal will clear. If the description set up for the next train is a "letter" description, the switch will be lined normal and the signal will be cleared for the move to the center track.

Plans and Specifications

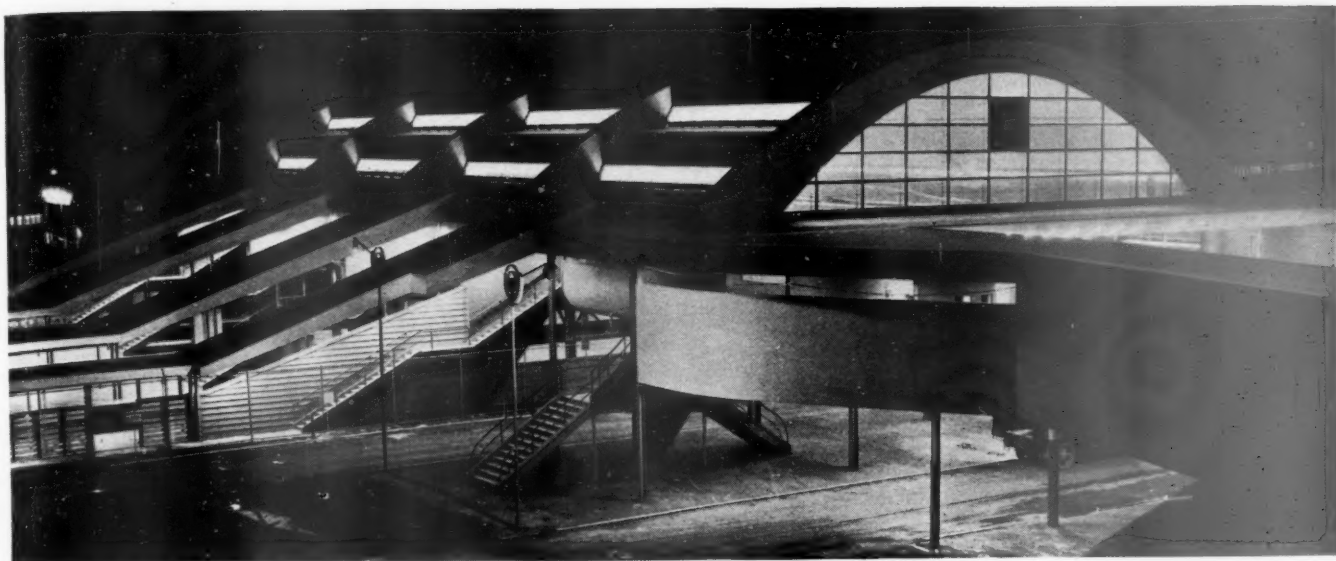
The railway facilities on the bridge, terminals and connections were financed by the California Toll Bridge Authority through bonds sold to the Reconstruction Finance Corporation. The railway cost approximates \$18,000,000 which is to be repaid by the railroads to the authority by tolls of 2½ cents per passenger, which are assessed against the respective railways and collected as a part of the fares.

The installation of the interlockings and the cab signal and train control system were made under the jurisdiction of the State of California, Department of Public Works, San Francisco-Oakland Bay Bridge Division, of which C. H. Purcell is chief engineer, Charles E. Andrew, bridge engineer, Glenn B. Woodruff, engineer of design, and C. R. Davis, resident engineer in charge of signaling.

The detailed plans for the wayside cab signal and interlocking controls were prepared by the General Railway Signal Company, which furnished all wayside signaling and interlocking equipment and performed the construction. (Continued on page 829)



Section of the Panel Showing the Train Describer System With Indicating Lamps at Upper Right and Sending Buttons at the Bottom



As Illuminated at Night, the Station Presents a Striking Appearance

Long Island Gets Modernistic Station at World's Fair

Structure built to handle shuttle business from and to New York incorporates unusual architectural features

A RAILROAD passenger station which strikes an entirely new note in architectural treatment and structural design has been built at the New York World's Fair for handling the passenger business at the Fair of the Long Island Railroad, an electrified subsidiary line of the Pennsylvania serving suburban communities on Long Island. With a capacity for handling up to 18,000 passengers an hour, the station is of temporary construction but it presents a substantial appearance and comprises an outstanding example of the manner in which a purely functional arrangement, designed to secure the maximum of efficiency in the transfer of passengers to and from trains, can be combined with modernistic treatment to produce a highly attractive appearance. Through the use of a combination of straight lines and of long sweeping curves, a striking architectural effect has been achieved, which is enhanced by means of an attractive color scheme, the use of indirect lighting on the interior, and the utilization of fluorescent tubes in the illumination system.

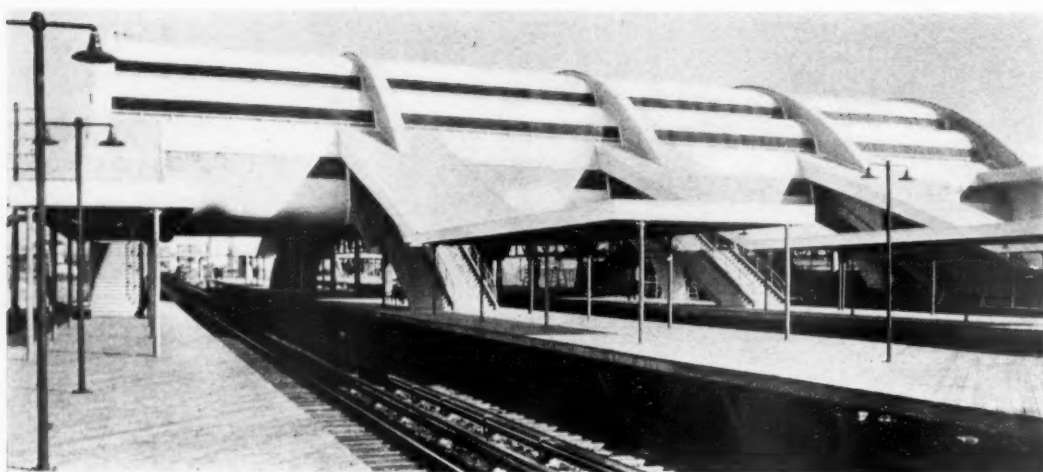
Situated on the double-track

North Side branch of the Long Island, which skirts the northerly boundary of the Fair grounds, the station is located about $8\frac{1}{2}$ miles east of the Pennsylvania station in New York City and comprises the easterly terminus of a shuttle service that is being operated between the Pennsylvania station and the Fair. The station, which involves a combination of steel and timber construction, is of the through two-level type,

with the main concourse located directly over the tracks, and spans six tracks which were provided by shifting the eastbound through track to the south a sufficient distance to allow the construction of four shuttle tracks between the main tracks. There are four platforms at car-floor level, two of which are of the island type and serve the four shuttle tracks, while the other two are located to the north and south of the station track layout and serve the eastbound and westbound through tracks, respectively.

Inbound travel to the Fair will normally be confined to one of the island platforms and outbound business to the other, but the four shuttle tracks have been so arranged that as many

This is the first of a series of articles designed to indicate to railroaders what to look for at the New York World's Fair. As announced in last week's issue, the next four articles will cover respectively the four separate sections of the railroad exhibit building proper. May 20 will describe the "industrial mountain" of the railway equipment and supply group together with exhibits outside the railroad building but pertaining to the railroad business; May 27 will cover the extensive model railroad system of the Eastern roads; June 3 will point out the high spots of the on-track exhibits, and June 10 will tell of the pageant "Railroads on Parade." Finally, the issue of June 24 will bring a detailed description of the *piece de resistance* of railroading at the fair—the new 6-4-4-6 high-speed passenger locomotive exhibited by the Eastern lines.



General View of the Long Island's Station at the Fair, Looking From the East

as three of them can be used simultaneously for either eastward or westward movements, depending on the preponderance of travel.

The Track Layout

The west end of the station track layout has been interlocked and signaled and a tail track has been provided to the east so that inbound shuttle trains may continue on to the tail track and then return to the west-bound platform.

In addition to the shuttle service, all regular suburban trains operating over the North Side branch will make stops at the new station during the Fair, while certain through trains of the Pennsylvania will be operated direct to that station. For handling the latter trains a seventh track has been constructed to the north of the northerly platform. This platform has been made of sufficient length to handle 16-car trains of the type that are in regular through service on the Pennsylvania, while the other three platforms are designed to handle 12-car multiple-unit trains. All the platforms are of timber construction, with flat-type frame canopies supported on pipe columns, and because of the generally unstable character of the subsoil in this vicinity the platforms are supported on large spread footings consisting of timber grillages.

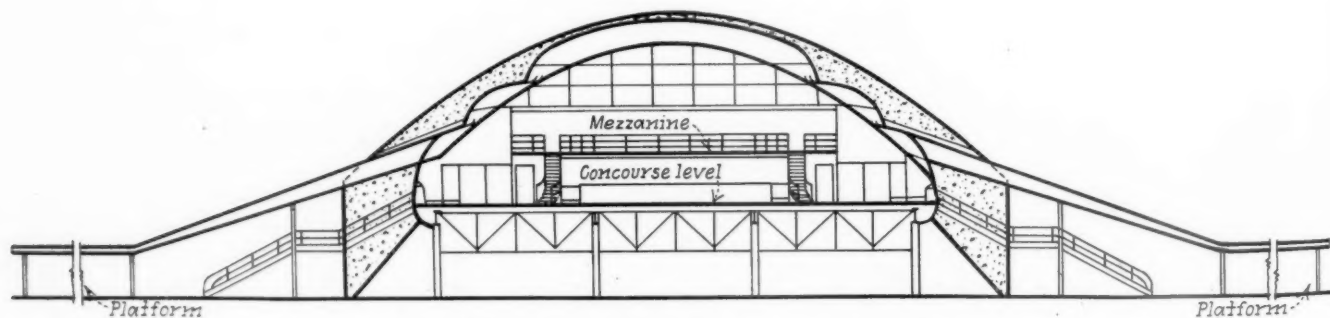
From the platforms, stairways, consisting of conventional steel stairs with concrete treads, extend up from both directions to the concourse, which has approximate overall dimensions of 90 ft. by 200 ft. Since the roof is supported by transverse steel arches, the floor area is entirely free of supporting columns. The main entrance is at the south end of the station where an outside terrace, approximately 80 ft. long and 90 ft. wide, terminates in two diverging ramps that extend down to the ground level within the Fair grounds. Patrons wishing

to transfer between the station and the bus transportation system within the Fair grounds may do so by means of stairways leading off the terrace, which provide access to bus drives and a platform under the south end of the concourse.

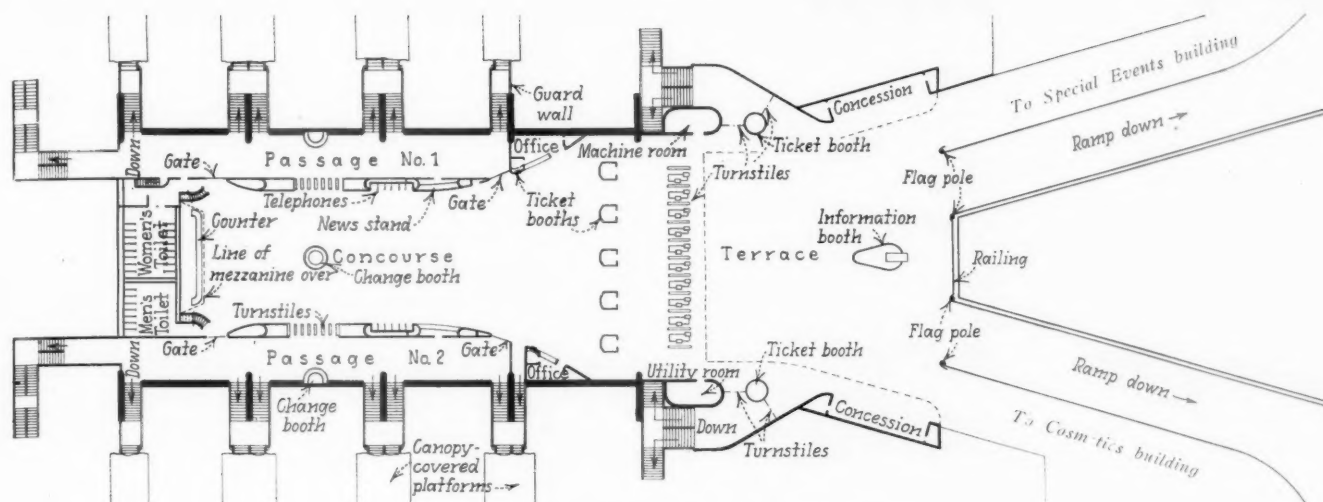
Station Layout

The one-way passenger rate between the Fair and the Pennsylvania station in New York is 10 cents and the plan of operation provides for the collection of both inbound and outbound fares at the Fair station. For this purpose two-way turnstiles are used, which are arranged in rows along each side of the concourse at a distance of 15 ft. out from the side walls. In line with the turnstiles and parallel with the side wall on each side of the concourse are also placed a row of telephone booths and a newsstand, which help to separate the passageway behind each row of turnstiles from the main floor area.

Near the southerly end of the concourse each passageway behind the turnstiles terminates in an enclosure containing office space and a booth for the sale of Fair tickets. These enclosures are placed against the side walls of the station and are each triangular in plan, with the apex to the south so that at this point the floor area of the main part of the concourse widens out to the full width of the structure. At this location a row of five additional ticket booths for the Fair are placed in a row across the concourse, while directly to the south of the ticket booths are arranged a transverse row of turnstiles through which visitors to the Fair must pass to gain entrance to the grounds. While these turnstiles are located on the terrace just outside the concourse they are protected by a canopy which frames into the facade of the station building. Patrons returning to the station from the Fair enter the concourse by means of a passageway about 10 ft. wide at each end of the row of turn-



Typical Cross Section Through the Station, Looking North



Floor Plan of the Station and the Entrance Terrace

stiles. Thus, to insure the unimpeded movement of patrons to and from the station, the opening at the south end occupies the entire width of the structure.

At the extreme north end of the station at the concourse level are located the toilet and rest-room facilities, while on a mezzanine floor above this space are the station master's office and locker space. The mezzanine floor also embodies a lounge overlooking the concourse and is reached from the main floor by means of a curved stairway at each end. Directly underneath the lounge area, which is of cantilever construction, is a counter behind which are located the railroad ticket office, the bureau of information and the telegraph office.

The facilities at the north end of the station occupy a total width of about 60 ft. and are placed on the center line of the concourse so that there is an open space on each side, this space comprising an extension of the passages behind the turnstiles. In the wall at the north end of the concourse a double-width emergency exit door is placed at the end of each passageway, these doors connecting with broad stairways leading to the ground level.

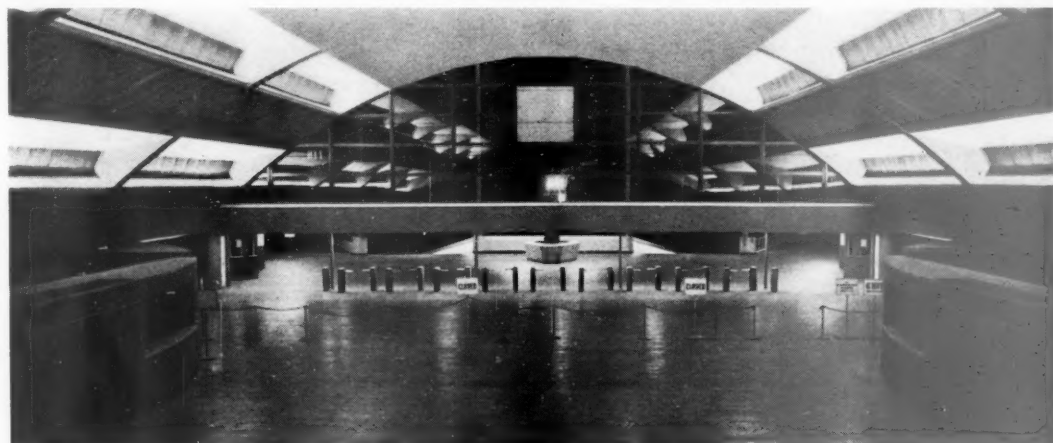
The terrace at the south end of the station is flanked along each side by a canopied concession booth and also embodies a covered information booth, which is located on the center line of the terrace at the south end. A Fair building is located directly adjacent to the terrace on each side, that to the west housing a cosmetic exhibit and the one to the east being known as the special events building, and both of these structures can be reached directly from the terrace. At the foot of each of the ramps leading up to the terrace appears a large statue,

one of which depicts an agricultural worker while the other comprises a figure of an industrial worker.

Construction Features

The principal members in the structural frame of the station are the rigid-frame tied steel arch trusses that support the roof, there being five such trusses spaced slightly less than 50 ft. apart. These arches are placed in the same track spaces as the passenger platforms and each arch and its tie member, consisting of a continuous deck truss placed below the floor level of the concourse, are supported by four evenly-spaced steel columns which are carried on timber-pile footings. The principal floor-carrying members consist of I-beams spanning the tracks between the columns and trusses, these beams being fitted with wood nailers to which the timber joints of the concourse floor are fastened. I-beams spanning between the trusses in the roof area serve as the rafters, although additional stability is imparted to the roof structure by four longitudinal lines of box girders, triangular in section, which will be described in more detail later.

The roof covering of the station consists of canvas applied over building paper and wood sheathing, the latter being nailed to timber purlins. In general the contour of the roof section follows the curvature of the trusses but a strikingly modernistic effect has been created by allowing the trusses to project above the roof contour and by enclosing them, to give a rectangular section, with timber sheathing covered with stucco. Also, the trusses are continued beyond the side walls of the station by



An Interior Night View of the Station, Taken Before It Was Entirely Completed

means of false abutments which, piercing the canopies and treads of the stairways, taper to a narrow bearing at the platform level. Like the trusses, the false abutments are boxed in and covered with stucco, and have the effect of enhancing the impression of strength and stability that is imparted by the structure as a whole.

Windows are Unusual

The windows in the station are also of unusual design, consisting of bands of corrugated wire glass, there being three such bands on each side of the station, which extend the length of the structure, being interrupted in their continuity only by the projecting roof arches. One of the continuous windows on each side of the structure is placed in the side wall at a height of 4 ft. above the station floor, while the other two are placed in the roof and have the effect of setting the upper portion of the roof off as a clerestory. Since it was desirable to arrange the glass in the two windows in the curved roof at an angle approaching the vertical, the roof contour in the immediate vicinity of the windows is adjusted to make this possible, thereby imparting a stepped effect to the roof section. The lower edges of the lengths of corrugated glass are supported on wood chairs spaced 5 ft. apart, with the spaces between chairs left open for ventilation. A continuous metal baffle placed directly inside this opening prevents the entrance of water.

At a point just below each of these windows the triangular box girders mentioned previously are used in the roof construction. These girders are placed in continuous lines extending the length of the structure, and consist in each case of a plate girder, placed with the web in a vertical position, and two trusses which form the other two sides of the triangle. In each case the apex of the angle formed by the two trusses lies immediately at the base of the window, with the lower truss being placed at an angle that conforms to the inclination of the station ceiling and the upper truss being inclined to conform to the pitch of the roof, which is slight for a short distance below each window.

Other Features

Among other aspects of the station that are worthy of mention is the design of the canopies over the stairways leading down to the train platforms. These canopies, which are largely of frame construction with canvas-covered flat roofs and ceilings covered with wall board, have facias which increase in width at a uniform rate from the lower end upward, thereby creating a novel effect. The canopies over the stairways are in effect continuations of the platform canopies, and at their upper ends they frame into the top of the station side wall.

A striking effect as well as ample daylight illumination of the interior of the station, have been achieved through the extensive use of plate glass in the end walls of the structure. In fact, at the south or facade end of the station the entire cross-sectional area above the opening that extends entirely across the building is fitted with steel sash glazed with plate glass. This area of glass, in the center of which is placed a large clock, is stiffened by means of open-bar joists placed vertically on the interior of the wall, which also serve as hangers for partially supporting the canopy that covers the line of turnstiles just outside the facade, this canopy also being supported in part by pipe columns. At the north end of the station all of the cross-sectional area above the mezzanine level is filled with plate glass.

On the interior of the station the floor is of "traffic top" laid in mastic directly on the timber decking; the

wainscots, the telephone and other booths and the rest rooms and office at the north end are finished in composition board and the ceiling is of gypsum wall board. Except for the turnstiles and the telephone booths, both of which are painted blue, the interior of the station is finished in several shades of brown, ranging from a chocolate brown for the floor, the wainscots and the various booths to a light tan for the ceiling of the clerestory. On the exterior, the station is painted a silver color and is trimmed in blue and orange, the stucco-covered arch projections being of the former color.

Illumination System

For night illumination in the station, an indirect lighting system is used, which consists largely of continuous lines of lights placed in metal troughs directly under each of the bands of corrugated glass. Fluorescent tubes are used for the lower row of lights on each side of the station, while elsewhere the lamps are of the incandescent type. Provision was also made for ample illumination of the terrace at the south end of the station, the principal lighting fixtures at this location consisting of clusters of frosted bulbs placed at the tops of four combination light standards and flag poles, which are arranged in a row across the terrace at its extreme south end. Other lighting fixtures on the terrace consist of recessed fluorescent tubes placed in the ceilings of the canopies along both sides of the terrace and in that of the information booth near its south end. This booth, incidentally, is streamlined in design, both the canopy and the booth being pear-shaped in plan, while the canopy is supported cantilever-fashion by an inclined rectangular column consisting of a framework of steel enclosed in a wood covering.

This station was designed and built by the construction department of the World's Fair in collaboration with the engineering department of the Long Island, of which A. C. Watson is chief engineer. The work was done under the general supervision of Col. J. P. Hogan, vice-president and chief engineer of the Fair organization, and Major L. B. Roberts, assistant chief engineer. P. A. Strobel, chief structural engineer of the construction department of the Fair, was in direct charge of the design of the station, while Irwin L. Scott, chief architect of that department, was the architect for the project. Until his death in July, 1938, H. C. Crowell, assistant engineer of the Long Island, was the active representative of the railroad in matters relating to the design and layout of the station. The station is to be maintained by the Fair organization, which will also administer all the concessions in the station and on the terrace. All functions in the station that are essentially railroad in nature, such as the sale of train tickets and the dispensing of train information, will be administered by the railroad.

THE CHIEF OPERATING OFFICER of a trunk line reports the following explanation sent to him for the queer behavior of a signal which stopped a passenger train for no apparent reason: "We have investigated this and find that the trouble was caused by a boy driving a cow across the track at Taylorsville with a chain dragging. He states that the chain hung in a joint and while trying to get it loose, he heard the train stop. We found no other trouble and feel sure the circuit was shunted from green to red, clearing again when the chain was removed."

All of which reminded our signal expert of the signal in the north country which acted queerly each winter, showing red blocks for no apparent reason. After much technical research, the trouble was traced to a farmer living nearby who repeatedly drove across the tracks with a sleigh equipped with steel runners that stretched from rail to rail.

Carl R. Gray Dies at 71

Former Union Pacific head
passes in midst of active
post-retirement career as
roads' minister-at-large



Carl R. Gray

CARL R. GRAY, vice-chairman of the board of directors of the Union Pacific, who retired as president of the road on October 1, 1937, passed away in his sleep early on May 9 at the Mayflower hotel, Washington, D. C. He had appeared his usual hale and jovial self the day before while attending to matters in his New York office and at dinner in Washington; hence his death came as a severe and sudden shock to associates.

Although Mr. Gray retired as chief of the Union Pacific three days after he had reached the 70-year retirement age limit of the company, he continued to serve the road as vice-chairman of the board of directors and a member of the executive committee, participating actively in public and employee relations and legislative matters affecting not only the Union Pacific but the railroad industry in general. Thus "retired" he put in some 18 months of difficult and trying work in conferences and before legislative committees, bringing over 54 years of versatile and continuous experience in railroading to bear on the intricate problems confronting the carriers.

He had always taken a keen and active interest in the problems of the railroad industry, and this was especially true after President Roosevelt appointed him one of the three railway executives who together with three labor leaders composed the famous "Committee-of-Six," and subsequently spent a large part of his time in Washington seeking legislation to carry out the committee's program. Probably his

strenuous efforts within recent months in behalf of this program was the principal cause of his sudden and unexpected death.

Author Edward Hungerford once called Mr. Gray "one of the most lovable men in the business." As director of operations in the war-time United States Railroad Administration, Mr. Gray, as one close associate put it, "had to do a lot of things to a lot of people." Employees grumbled at wages vs. high prices; government and industry demanded cars and more cars; management sought to preserve the old dignities and priorities of private operation. Through this difficult period of short tempers, Carl Gray came with his quiet humanness and saving grace of humor, and virtually everyone became his friend.

In the equally difficult days since the war, as president of one of the largest roads in the country, he was regarded widely as the peacemaker of the railroad industry and retained the confidence of labor and government as well as of management, although everyone knew that he was paid to fight the latter's battle. This trust by all parties was based chiefly on Mr. Gray's refusal to "slip things over." While he often fought broadside in the give and take of a large-scale industry, he insisted upon

the integrity of an agreement, once made. Said he on this point in addressing the superintendents' association in 1937: "We have contracts with some kind of a labor organization in practically every line of activity on the railroad. Those contracts should be sacredly observed. If the terms of a contract call for a certain specified procedure, that procedure should be followed religiously.

Young at Retirement Age

"I have great hopes for the railroad business. I have been in it more than half a century and in all that time Old Nick has been just around the corner. Several times we have seen a piece of his tail, and sometimes a hoof but he has never got around the corner yet. I don't believe he is any nearer around it now than at any time in that period."

*—from a talk delivered
by Mr. Gray in 1937*

We can't chisel on a contract and expect the other fellow not to chisel. In some cases embarrassment is caused to the management representatives on the adjustment boards by the lack or the failure on the part of subordinate officers not only to live up to the spirit but to the letter of the agreement which they have made."

Compounded with this combination of executive ability and kindliness of heart was a rich and never-failing sense of humor. He always had good stories on tap to tell, most of them original, and used them not only to amuse his acquaintances when at leisure (which, indeed, was not often) but as well to win difficult business arguments, in the manner of another peacemaker, Abe Lincoln. Hence he was extremely popular with a wide circle of friends and associates in all walks of life. When he and Mrs. Gray celebrated their golden wedding anniversary in 1936, almost 1,500 railroad and business executives and "old timers" of the Union Pacific gathered in a huge banquet to pay tribute and the program was broadcast by radio to the homes of the thousands of other friends unable to attend.

Mr. Gray was especially equipped by endowment and experience to undertake the responsibilities of a railroad executive. He entered railway service at 15 as a rookie telegraph operator in an unimportant station of the Frisco; at 30 he was a division superintendent on the road. Passing through each of the jobs in the successive ranks of the operating service, he reached his first presidency (of the Spokane, Portland & Seattle and Oregon Electric) thoroughly seasoned. And after his splendid work during the war, Carl Gray was mentioned in connection with the highest posts the railroad industry can offer. He was offered, for example, the presidency of the expansive Canadian National before its occupancy by Sir Henry Thornton; he chose, however, to remain with the Union Pacific, whose president he had become upon retirement of an old admirer, the late Judge Robert S. Lovett.

Mr. Gray is survived by a family endowed with many of his own qualities. Mrs. Gray was named "American Mother of 1937" by the Golden Rule Foundation as the climax of an active social and public life. Two sons are active railroad men,—Carl R., Jr., is executive vice-president of the Chicago, St. Paul, Minneapolis & Omaha, while Russel D. serves as general freight agent of the New York, Ontario & Western. The other, Dr. Howard K., is a noted surgeon at the Mayo clinic, Rochester, Minn.

Carl Raymond Gray was born on September 28, 1867, at Princeton, Arkansas, and attended the preparatory department of the University of Arkansas. He entered railway service as a telegraph operator for the St. Louis-San Francisco in March, 1883, and passed up through successive ranks of the operating department as station agent, chief clerk, general western agent, commercial agent, district freight agent, division freight agent, until he became division superintendent in 1897. In 1900 he was appointed superintendent of transportation; in 1904, general manager, with jurisdiction extended over the Chicago & Eastern Illinois, and later that year, second vice-president and general manager. He was elevated to second vice-president in charge of operation in 1906 and became senior vice-president in 1909.

In 1911 he left the Frisco to become president of the Spokane, Portland & Seattle and the Oregon Electric, resigning in 1912 to become president of the Great Northern.

From 1914 to 1918 he served as president of the Western Maryland and also as chairman of the board of the Wheeling & Lake Erie from 1917 to 1918.

During the war he served as Director of Operation of the United States Railroad Administration, returning in January, 1919, to his former positions with the Western Maryland and the Wheeling & Lake Erie. Finally on January 1, 1920, he was elected president of the Union Pacific and remained in that post for 17 years until he was succeeded by William F. Jeffers on October 1, 1937.

Among other honors accorded Mr. Gray were honorary degrees of LL.D. by the University of Maryland, 1916; University of Arkansas, 1929; and Washington and Jefferson College, 1937.

Rail-Highway Co-Ordination Brings Business*

By G. W. Frink†

IN the fall of 1928 we formed the Southwestern Transportation Company as a highway motor freight line operating on the highways paralleling the railroad. This organization was able to regain much of the local traffic. However, by this time the highway trucking business had grown from a small industry, serving principally towns located within the trade area of a distributing center, to a nationwide transportation industry, soliciting and moving freight 500 to 1,000 miles or more. Therefore, if we hoped to stay in the l. c. l. business it was necessary to speed up our long distance service not only to the larger points that receive a daily merchandise car but to all points on our line. This meant that we would have to have faster train service whose schedules could be co-ordinated with the truck schedules of the Southwestern Transportation Company.

In 1931 we established a fast merchandise train, the "Blue Streak," from St. Louis to Texarkana, Texas, and Shreveport, La. It provides first morning service to points as far south as Pine Bluff, Ark., 400 miles from St. Louis, and first day delivery at Texarkana, Texas, and Shreveport, La., 560 and 594 miles, respectively, from St. Louis. This train handles only merchandise. Merchandise cars are loaded daily at St. Louis to the principal points on the main line. Freight destined to main line stations other than these key or so-called break-bulk points, and to points on branch lines, is distributed by highway trucks of the Southwestern Transportation Company. While this company is a common carrier by motor vehicle in its own right and offers its services to the public generally, its schedules are closely co-ordinated with that of the "Blue Streak" and the highway truck service is a component part of our merchandise service.

To illustrate, merchandise cars are loaded daily at St. Louis for Malden, Mo. These cars contain freight destined to points on the main line in each direction from Malden to Dexter, and to Paragould, Ark., a distance of 83 miles. They also contain freight for points on branch lines to Caruthersville, Mo., and Blytheville, Ark. The cars arrive at Malden shortly after midnight, the unloading crews start work at 2 a. m. and the trucks leave at 3 a. m. with shipments destined to Caruthersville, Mo., 64 miles from Malden and Blytheville, Ark., 92 miles from Malden. These trucks arrive at Caruthersville at 5:40 a. m. and at Blytheville at 7:55 a. m. Trucks also leave Malden at 3:45 a. m. destined to Paragould, Ark., arriving there at 6:10 a. m. The northbound truck from Malden leaves at 5:45 a. m. and arrives at Dexter at

* From an address delivered before the Western Railway Club at a recent meeting in St. Louis.

† Assistant General Freight Agent, St. Louis Southwestern.

6:35 a. m. The St. Louis-Malden merchandise car serves an area of approximately 140 rail miles. All of the towns in this area receive early next morning delivery on l. c. l. shipments from St. Louis. The average weight of the St. Louis-Malden cars is in excess of ten tons, which is good loading.

On their return trip to Malden the trucks do not return empty, but are loaded both ways. The Southwestern Transportation Company is a common carrier in its own right and hauls l. c. l. or less-than-truckload freight. It solicits business actively in Arkansas and Memphis, Tenn., destined to Blytheville, Caruthersville, Malden and other towns in this area. The Cotton Belt also solicits and handles l. c. l. freight from the Southeast and Southwest destined to these points. This freight is assembled in Memphis and forwarded each night on trucks leaving there at 8 p. m. for Blytheville, Caruthersville and Malden. Therefore, this territory also receives overnight deliveries from Memphis and Arkansas points via our co-ordinated service. We do not operate a scheduled merchandise car from Memphis to any of these points as all l. c. l. freight is handled in trucks. By operating in this manner, our trucks average better than 75 per cent loaded to total miles operated.

Another merchandise car is loaded daily at St. Louis for Jonesboro, Ark., the next main line break-bulk point beyond Malden. This car contains freight destined to main line points in each direction from Jonesboro to Brookland and to Hickory Ridge, a distance of 46 miles, and to Memphis, Tenn., 76 highway miles from Jonesboro. The cars arrive at Jonesboro around 3 a. m. and are unloaded immediately. The Memphis truck leaves at 4 a. m. and arrives in Memphis at 7:45 a. m. Another truck makes the city deliveries at Jonesboro and as soon as this work is completed this truck makes the deliveries to towns south of Jonesboro as far as Hickory Ridge, a distance of 39 miles. Here again the trucks run loaded both ways. On its return trip, the Memphis truck leaves Memphis at 12:30 a. m., handling both rail and truck l. c. l. freight for the Jonesboro territory.

In a similar manner train and truck schedules are co-ordinated at every point on our lines from Malden, Mo., to Waco, Texas. The schedules have been worked out with a view to keeping the trucks loaded both ways and eliminating as many lightly loaded merchandise car miles as possible, and, at the same time arranging the schedules to give the best possible service on the freight, since service is equally as important as rates.

It is not practical or possible for the rail lines to discontinue the handling of l. c. l. freight, as there is no other agency that can take over the handling of all l. c. l. freight. No other form of transportation has the organization, the facilities, the finances or the inclination to take over this business in its entirety, and if we have to continue handling this traffic, why not get as much of it as we can, and handle it as efficiently as we can? From our experience, co-ordinated train and truck service is the most satisfactory and efficient way. Proper co-ordination allows heavy loading of merchandise cars and it provides the same prompt service to the smaller towns and communities as is given to the larger towns or key points.

Collecting Freight

The same trucks that are used in distributing the freight are used in collecting miscellaneous l. c. l. shipments and assembling them at strategic points where they may be loaded into a car. As an illustration, we have a truck leaving Mt. Pleasant, Texas, at 1:15 p. m. destined to Dallas, Texas, 133 miles distant, arriving

there at 6 p. m. On its trip to Dallas this truck passes through several good towns, such as Sulphur Springs, Texas, and Greenville. L. c. l. shipments originating in these towns are picked up by this truck and carried to Dallas where they are immediately transferred to the merchandise cars leaving Dallas the same night. As Dallas is a large city and a terminal point on our lines, a complete layout of merchandise cars is loaded there daily. Therefore, the towns on our line have expedited outbound l. c. l. service as well as expedited inbound service through the medium of our co-ordinated system of handling l. c. l. freight. On our railroad we are convinced that co-ordinated service is at least part of the answer to the l. c. l. problem. However, for this service to work successfully and pay its own way, the rail carriers need a free hand in substituting highway service for train service.

The so-called inherent advantages of the motor truck are its agility and flexibility. It is not tied to rails and it needs only a one-man crew to operate it. It is efficient and economical in distributing and collecting freight within certain limits, but the motor truck is not an efficient instrument of transportation in handling heavy loads long distances. Even in short distances, such as it is used in co-ordinated service, it is necessary to have a fair load factor. As the tons hauled per mile decrease, the cost per ton mile increases. Therefore, where highway service is substituted for train service, the tonnage available for the truck movement must be taken into consideration. If co-ordination is to be successful, the rail lines must be permitted to serve their patrons by handling their local shipments in highway service as well as those shipments which have had prior rail haul or which will have a rail haul.

While congress, through the amended Interstate Commerce Act, has placed the duty upon the Interstate Commerce Commission of regulating both railroad and highway carriers, an equitable rate regulation of both, especially with relation to each other, is admittedly difficult. In my opinion, however, Part I of the Interstate Commerce Act, relating to rail carriers, and Part II, relating to motor carriers, should not be viewed as two mutually conflicting acts, but as two organic parts of the same law. It is doubtful if congress ever intended to perpetuate obsolete, ineffective and uneconomical practices. It is a fair inference that it was the intention of congress to encourage the development of those types or combination of types of transportation which would give to the public the best service at the lowest cost.

Signaling for a Train a Minute on San Francisco Bridge

(Continued from page 822)

tion work under contract. The train control and cab signal equipment on the 88 Key System units and the 17 Sacramento Northern cars was also furnished by the General Railway Signal Company and installed by the respective railroads. The train control and cab signal equipment on the 110 Interurban Electric cars and the materials for the additions to interlockings on the Southern Pacific approaches at Oakland were furnished by the Union Switch & Signal Company and installed by the railroad forces. Signaling on the Key System approaches, including cab signal and train control apparatus to replace wayside signals on two miles of double track, was furnished by the General Railway Signal Company and installed by the Key System.

Working the Iron Horse*

A discussion of vital factors in converting 90 per cent availability into maximum utilization

By A. A. Raymond

Superintendent, Fuel and Locomotive Performance, New York Central

IN discussing the utilization of locomotives, I should like to differentiate clearly between utilization and availability. That is, a locomotive may be available, but if the work is not there we can't take advantage of that availability. In other words, utilization is using as much as possible of the potential availability. From a railroad standpoint it seems to me that that really is the only important item. Availability is no good if it is resting in the bank. Availability is of value to railroads only as it is used.

Thoughts on this very important subject seem to group themselves and suggest discussion under four headings: What is being obtained from locomotives? What is it possible to obtain from them? Why are locomotives taken off jobs and sent to the enginehouse? If the analysis of an enginehouse shows locomotives there in excess of need, what can be done about it?

Present Utilization of Locomotives

You are familiar with the reports each road makes to the I. C. C. totaling passenger-, freight- and switch-locomotive miles, the number of active locomotives, and dividing one by the other, the average miles per active locomotive day. The figures are published in the *Railway Age* and complete leaflets are prepared by the Association of American Railroads, Bureau of Railway Economics, the number of active locomotives being determined, under the commission's order, as of the last day in the month.

Such figures, based on a year's performance, would seem to be perhaps the best comparative data that could be submitted for your information. However, the published figures cover all of the roads, obviously too many to show you in this paper, so for the purpose of our discussion, I have selected the 13 largest systems arranged in order of the miles obtained from their locomotives.

You will note from one of the tables that 133 to 254 miles per day are obtained by these different systems with their locomotives in passenger service. May I ask you to keep in mind for a moment only the figure for the best, that is, the 254 miles per active passenger locomotive per day.

In freight service, you will note that 123 is the best average miles per day. In switching service, the miles per active locomotive per day varied from 43.4 to 76.8. So now we have three figures showing the best average performance in each of the three classes of service: Passenger, 254; freight, 123; and switch, 76.8 miles.

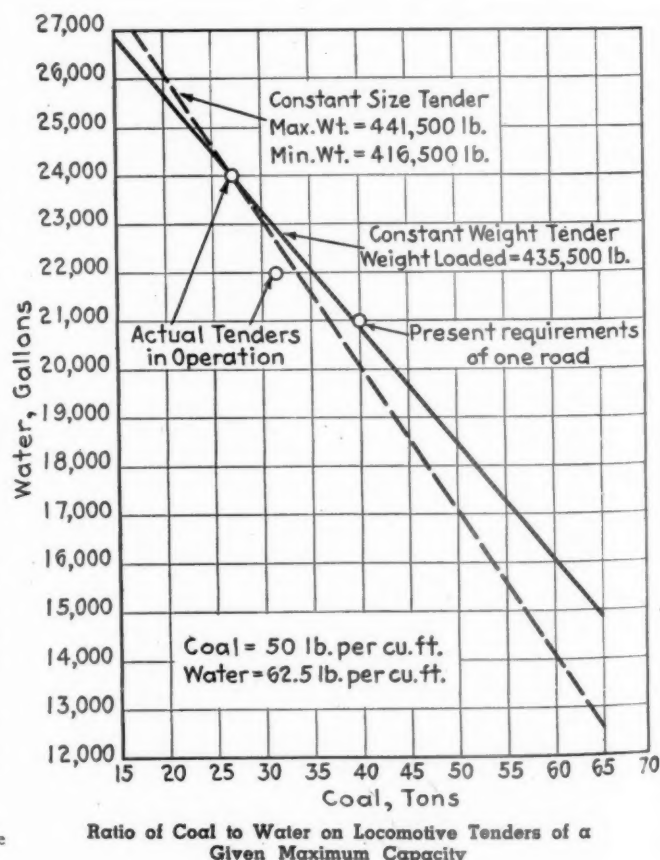
The miles obtained from the report noted can be converted into hours the locomotives are working per day, because we find in the case of the leader in passenger

service, their average speed is 41 miles per hour, which means 6.13 hours working; in the case of 123 miles in freight service, an average speed of 17 m.p.h., or 7.29 hours working; in the case of the switch engine, of course, the commission allows 6 m.p.h., so that 76.8 miles a day means 12.8 hours working. Or to put this together in some easily retained figures, road locomotives work approximately 7 hours a day, and switchers about 13 hours. That is, what is being obtained by the roads that are using their locomotives the greatest number of hours a day.

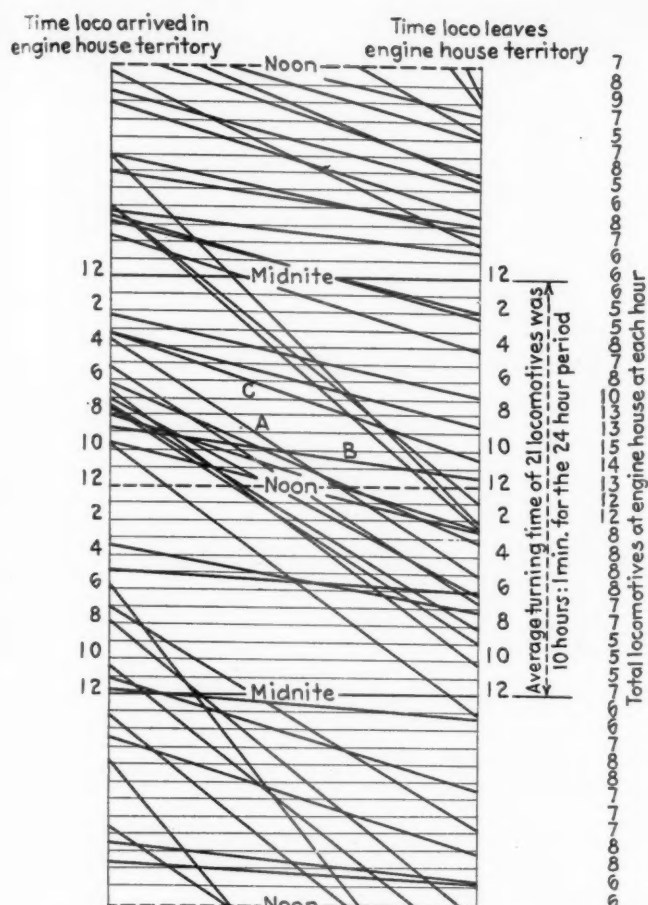
This certainly shows to all of us the work that is ahead before we can be satisfied with locomotive performance.

What Performances May Be Expected

We turn now to the second topic of what it is reasonable to expect a locomotive in good condition to do. Let us consider active locomotives, that is, eliminating all locomotives held for shop repairs, or held in the house 24 hours or more for work. In other words, these are the active locomotives that come in, have a few adjust-



* Abstract of a paper on the general subject, "More Intensive Locomotive Utilization and Economics Resulting Therefrom," presented at the April 17 meeting of the Western Railway Club at Chicago.



Type of Chart Used in Analyzing and Reducing Locomotive Time Spent in Enginehouses

ments made, taking a short period of time, and are available for another job. And, here, I think we should all give credit to the many minds working on the improvement in locomotive design and maintenance. To mention just a few items, the cast-steel bed, roller bearings, water treatment which has eliminated the bugaboo of pretty nearly every locomotive received at the enginehouse needing a boiler washout, and many other improvements.

In passenger service, the Atchison, Topeka & Santa Fe has locomotives operating daily 1,236 miles between La Junta, Colo., and Los Angeles, Cal., regularly day in and day out. I don't think it is necessary to look any further for a better performance. Many runs of 1,000 miles have been made, after which it was not found necessary to take the locomotive off the job for repairs. That is, it was still in first class mechanical condition.

In freight service, there are records of locomotives making ten such 1,000-mile trips without being held 24 hours for mechanical repairs. Of course, we will all agree right here that this means locomotives in first-class condition. This means locomotives that have been thoroughly inspected by competent inspectors; the necessary work has been done with the thought of obtaining the maximum use of the locomotive before it was necessary to stop for other mechanical repairs.

In switching service steam locomotives have been run 30 calendar days without being taken off the job for any mechanical work or even fire-cleaning. That is, the fire was maintained; the locomotive was coaled with a clam-shell out of a car; pan dumped on the track and ashes picked up with the clam-shell after the locomotive continued out of the way. Perhaps it is hardly necessary for me to quote these figures because I think competent

railroad men will agree that this is practical with a locomotive in good condition.

Why Locomotives are Sent to the Enginehouse

In considering why locomotives are taken off the job and sent to the enginehouse, may I quote from a statement in the *Railway Age*, which I believe was made before the Western Railway Club by E. E. Chapman of the Santa Fe, that they put oil on their locomotives in preference to coal, because they could obtain three times the mileage from a given weight of oil that they obtained from the same weight of coal. That would seem to be one of the serious limiting factors in the use of steam locomotives. Schedules are fast; it takes time to make an extra stop, dump the ash pan and take coal; so locomotives are taken off the job because they have run out of fuel. For the purpose of this discussion, I am sure you will allow me to discuss coal and not water, because in general, although both are limiting factors, it is easier to pipe water to a handy place for a locomotive than it is to obtain coaling facilities.

Therefore, 254, 123, and 76 miles represent the best average daily performances in the three classes of service, with the supply of coal generally a controlling factor.

Many tenders are being built to carry 25 tons of coal. In passenger service, this means about 500 miles before we are out of coal and, in freight service, about 150 miles. Here is a good locomotive, going out of the enginehouse definitely limited as to potential mileage before it is necessary to take coal.

Studying the size of tenders recently built we find a steady increase in size. Of course, locomotives are becoming larger and speeds faster which explains part of the reason for the larger tenders, but we are also attempting to run locomotives longer distances and there is abundant evidence that it is generally considered impractical to make an extra stop with either a passenger or

Locomotive-Miles per Active Locomotive Day—Roads Operating Largest Number of Locomotive-Miles in 1938

Road*	Service		
	Passenger	Freight	Switch.
1.....	254.2	123.3	76.8
2.....	251.1	117.9	75.7
3.....	230.9	115.4	74.6
4.....	220.1	106.4	73.8
5.....	203.2	103.5	68.4
6.....	202.6	103.0	68.0
7.....	200.9	101.4	66.7
8.....	186.8	100.9	65.7
9.....	182.9	99.4	61.5
10.....	164.7	98.1	56.3
11.....	164.1	86.9	54.0
12.....	161.2	83.1	46.4
13.....	133.4	74.2	43.4
Averages:			
Passenger service:			
Western District.....	192.6		
Eastern District.....	175.6		
Pocahontas Region.....	157.3		
Southern Region.....	155.4		
United States.....	178.0		
Freight service:			
Eastern District.....		102.4	
Western District.....		101.2	
Southern Region.....		90.1	
Pocahontas Region.....		86.2	
United States.....		98.9	
Switching service:			
Eastern District.....			69.7
Pocahontas Region.....			65.7
Western District.....			63.1
Southern Region.....			52.6
United States.....			64.7

*The road numbers do not indicate the same railroads in the three columns.

freight train for coal alone. I have quoted the Santa Fe use of oil to save some coal stops. I have notes from different railroads, one in particular, saying that although they have coal docks some 2,000 ft. from a scheduled stop, they are building an extra coaling plant at the stop;

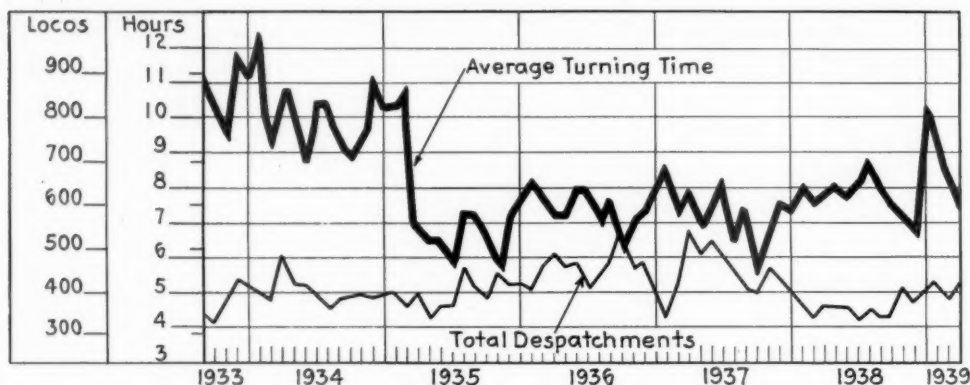


Chart Showing Average Locomotive Turning Time and Total Despatchments at an Enginehouse

and another one 1,500 ft. from the present plant; both of them built to eliminate the necessity of either obtaining another locomotive or making a separate coal stop. If we had say a 60-ton tender, we could go probably 1,000 miles in passenger service and 600 miles in freight for coal. You may ask me whether such a tender is practical.

On one of the charts I have plotted the coal and water capacities of tenders that have been built by the large locomotive companies in the last ten years. On this chart we have plotted tenders based on two groups that are in actual operation. In one case, taking the total weight of these tenders, we have drawn a line showing the relative proportion and water or coal that the tenders can carry. In other words, if you had 60 tons of coal, the maximum water you could carry would be 14,000 gal. If you had 25,000 gal. of water, the maximum coal you could carry would be about 24 tons.

You will note there are two lines on the chart. One of them is based on a constant weight of 435,500 lb., one of the tenders now in operation, and the other is based on a constant cubical volume. The whole purpose of this chart is to bring out that large coal or large water capacities are possible if they fit your picture.

Economics of Large Tenders

The question that naturally arises in your mind is what is the expense of hauling these large tenders over the road and for the sake of illustration I am showing in one of the tables an analysis of fuel consumption on a 930-mile run, using approximately 54 tons of coal. The question is whether we will operate with a comparatively light tender carrying 15,000 gal. of water and 30 tons of coal or whether we will take the heavier tender, 15,000 gal. of water and 60 tons of coal. The two stops necessary for coal with the smaller tender use within 560 lb. of the amount of coal necessary to haul the larger tender. This, of course, is based on operating one locomotive through. If it was not possible to make the stop for coal on account of a tight schedule and another locomotive had to be used, the expense would be much higher because of the amount of coal used before the locomotive can be put back on another train. And then, of course, you have lost the service of a locomotive for an appreciable length of time. In other words, this large tender would seem to be justified.

There then would seem to be two means open: first, take the coal with us as far as we can, perhaps in the 60-ton tender that has been described above; or second, build a small but adequate coaling plant at a point where it is necessary to stop trains for change of crews, cabooses or something of that nature. When you consider the cost of enough large tenders to operate a territory if schedules permit, perhaps the coaling plant is cheaper, and yet the

pressure of the operating department would seem to spell "Take it with you." In either case the ultimate is to get mileage, however brought about. New locomotives, at least, should have large tenders.

Locomotives at the Enginehouse

If you have more active locomotives than are necessary to operate the railroad they must of necessity be at the enginehouse. It has been determined that a careful study of the number of engines at the enginehouses will indicate the extent of the surplus.

Here is a simple system of analyzing the movement of locomotives through the enginehouse. One chart has been prepared showing the movement of all of the particular class of power through an enginehouse. In other words, this might be the movement of the Mikados through a particular enginehouse. You will note here that locomotive *A* was at the house 13 hr. 20 min., ar-

Most Intensive Locomotive Use—Average Miles Per Active Locomotive Day Divided by Average Miles Per Train Hour

	Average working time, hr.
Passenger Service	
Union Pacific (254.2 divided by 41.1).....	6.13
Freight Service	
New York Central (123.3 divided by 16.9).....	7.29
Switch Service	
New York Central (76.8 divided by 6.0).....	12.8

riving at 3:40 a. m. and leaving at 5:00 p. m.; that locomotive *B* was at the enginehouse 2 hr., arriving at 9 a. m. and leaving at 11 a. m.; locomotive *C* was at the enginehouse 7 hr. 10 min., arriving at 3:15 a. m. and leaving at 10:25 a. m. Taking these three times together, we have 22 hr. 30 min. for the three locomotives, or an average of 7 hr. 30 min. each.

However, the important item here is, the fact that at 5 a. m. there were seven locomotives at the house; at 6 a. m. there were eight; at 7 a. m. there were 10; at 8 a. m. there were 13; and so on, so that there were from 5 to 15 locomotives at the house at one time. Considering now that locomotives are the same as stock on storehouse shelves, we at no time came anywhere near selling out the complete stock.

Recalling now that these are active locomotives, perhaps it might be possible to discuss this for a moment as the conversation of a typical division group of railroad officers consisting of the superintendent, assistant superintendent, chief dispatcher, yardmaster and enginehouse foreman. The question is—"Can we operate the division with fewer locomotives?" Our performance, as compared to others, is good, but our responsibility, which we must assume, is that we want to operate with the

minimum number and we are all convinced that that means a substantial saving in road locomotives.

To bring this matter a little more clearly to the fore, perhaps it would be possible to describe conditions on two divisions: (1) The first division, where there is considerable work to be done in co-ordinating the efforts of the different men, and (2) the second division, which appears to have an effective organization for increasing the use of locomotives.

(1) Perhaps the enginehouse foreman would say, "Well, it is pretty hard to keep these locomotives down

Comparison of Two Tender Capacities on an Assumed 930-Mile Run

	Tender coal capacity tons	
	30	60
Length of run, miles.....	930	930
Maximum coal consumption, tons.....	54	54
Number of refueling stops.....	2	None
Tons coal taken per stop.....	18	.....
Average tons of coal in tender.....	21	33
Average tender weight, lb. (same water consumption)....	296,300	381,500
Increased average load hauled, lb.....	.....	85,200
Increased ton-miles per run.....	.....	39,600
Increased coal used, lb., at 90 lb. per 1,000 G.T.M.....	.....	3,560
Increased coal used, lb., for two stops.....	3,000*	.....

*If locomotives are changed, this extra fuel consumption will be much greater.

to the minimum; they keep coming in and I don't know how many of them I am going to have to tie up for repairs and I must have power on hand all the time to fill any demands. For instance, the maintenance-of-way department called for three extra locomotives this morning" and the yardmaster might say, "It is very difficult with so many connections to know just how the picture is going to work out. There are times when they bring only two cars and sometimes they just seem to swamp us. Then there are cripples cut out in the yard and it is pretty hard to tell just when the trains will be run." Perhaps the dispatcher would say—"Well, I am trying to keep the locomotives at a minimum and I must be sure that no locomotives are run light. We can't hold the crews at this terminal, so it is a pretty difficult job all the time to try and co-ordinate so many different items."

(2) Or we might imagine a division where the utilization of locomotives has been very thoroughly discussed and the work better organized. For instance, the roundhouse foreman would say, "I am simply the garage keeper and I don't want any more locomotives around here than I absolutely need. As soon as the chief dispatcher tells me that he is going to need only three locomotives until 5 a. m. the next morning, I take loco-

motives out of service. Frequently he calls me and says there is a locomotive coming in on so and so and what do you think about turning her back on such and such a train. With my knowledge of the locomotives, I can tell him I think that undoubtedly will work out. He works in that way, continually keeping me advised as to what he is going to need and what is coming in and when."

Perhaps the yardmaster will say "I had some difficulty getting a line on what was coming from the connections, but with the help of the superintendent, we have the trains pretty well lined up now. There is one man that I still have trouble with, but fortunately I don't get enough from him to really throw my schedule out of balance." Then the chief dispatcher might say, "The yardmaster keeps me advised at least six hours ahead and frequently eight as to about when he is going to have his trains ready, and, from my knowledge of what is at the enginehouse and what is coming, I try to plan to use these locomotives coming in just as soon as the enginehouse figures they will be through with them and I find them very reliable. I had a little job the other Sunday afternoon. It looked as if we would have to fire up a locomotive. I had one coming in, but that would mean the train would have to be delayed about two hours. I conferred with the assistant superintendent who was on duty at that time and he said that, inasmuch as this was a division train setting up the various stations for Monday morning, he could see no objection to setting it back a couple of hours and in that way we saved taking a locomotive out of storage."

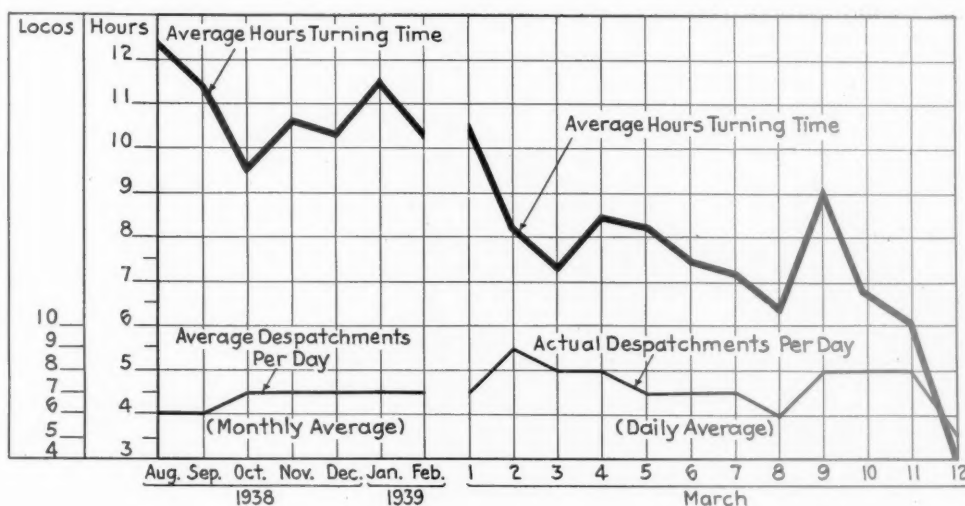
Efficient Locomotive Use a Daily Division Job

It would seem that this is a daily division job, to work out a schedule first based on the regular division trains that are to be run and then to work in the extras which are common on most any division.

This would seem to be the complete assumption on the part of the superintendent, chief dispatcher, yardmaster and master mechanic or enginehouse foreman of their responsibility in maintaining the number of locomotives in service at the minimum. Experience indicates that every division superintendent should have a conference at least quarterly, particularly if locomotive mileage is going down, to establish a maximum turning time based on the experiences reported at that time. Every railroad should aim at runs of at least 300 miles for locomotives leaving an enginehouse in road service.

(Continued on page 835)

Chart Illustrating the Results of Co-operative Effort in Reducing Locomotive Turning Time at an Enginehouse



Senate Committee Votes to Report Wheeler-Truman "Key Bill"

Favors S. 2009 in revised form which still includes provisions for regulation of water carriers

WASHINGTON, D. C.

THE Senate committee on interstate commerce on May 9 voted to report favorably to the Senate the so-called Wheeler-Truman "key bill"—S. 2009. The sub-committee working on the bill since the close of public hearings on April 14 made several changes in the measure; but remaining are the principal feature—regulation of water carriers by the Interstate Commerce Commission, and the original form—codification of the Interstate Commerce Act.

Among other new provisions was the writing in of the so-called through routes bill, giving the I. C. C. power to prescribe through routes and joint rates without reference to the short-hauling of any carrier; and of the resolution sponsored by Southern senators and representatives directing the I. C. C. to investigate interterritorial rates. Studies of the relative economy of the various modes of transport and of government aids to transport, which the original bill assigned to the I. C. C., would, under the revised version, be made by a three-member "board of investigation and research" appointed by the President.

"Fourth Section" Still In

The "fourth section" remains as Section 50, and it would apply to all forms of transportation. Other changes in the section are the elimination of the equidistant clause, as has been recommended by the I. C. C., and the addition of a provision, framed by Senator Reed, Republican of Kansas, to expedite the installation of rates published pursuant to relief from the long-and-short-haul clause. Present pooling provisions are extended to water carriers, but not to motor carriers; and the I. C. C. would be authorized but not directed to require a pooling of revenues derived from general rate increases. Terminal collection and delivery services of all carriers would be exempt from motor carrier regulatory provisions.

Working with the committee on the drafting of the bill have been E. M. Reidy, junior assistant chief counsel for the I. C. C., and Kenneth J. McAuliffe, assistant chief of the Bureau of Motor Carriers' Section of Complaints. Following the May 9 executive session at which the committee voted to make the favorable report these two I. C. C. staff members discussed the revised bill with representatives of the press. Going through the measure section by section it developed that the declaration of policy in Section 1 was unchanged from that in the bill as introduced; while Section 2 dealing with the scope and application was about the same although it carried a provision to extend to federations of cooperative associations the same exemption from the motor carrier regulatory provisions as is now accorded to cooperative associations themselves. Also, in that section there has been inserted in modified form the amendment sponsored by the State commissions to limit I. C. C. authority over intra-state motor carriers.

Section 4, dealing with the reasonableness of rates, fares and charges contains a new provision giving the I. C. C. power to pass on rentals paid to private car lines; while an amendment to Section 19, dealing with accounts, records, etc., supplies the necessary authority to examine the records of such car lines. Section 6, being the old section 3, deals with undue preference and prejudice. There are inserted words designed to prohibit undue preference to or prejudice against a "region, district, territory," in response to above-mentioned allegations of discrimination against the South. The section dealing with the filing of schedules by contract carriers gives the I. C. C. authority to make such schedules public after a finding that the secrecy gives the contract carrier a competitive advantage over a common carrier.

In the section on free transportation there remains the provision authorizing passes for general chairmen and counsel of employee organizations. Also, another provision was added to permit carriers to move free of charge the household goods of employees transferred from one place to another at the instance or in the interest of the carrier. Still another change in this section would permit government agencies to use motor carriers at their tariff rates, thus eliminating the need for getting competitive bids on a transport job. The bill as ordered reported adopts the present Interstate Commerce Act's commodities clause, applying only to railroads, thus following Senator Wheeler's suggestion that the proposed application to all forms of transportation was too drastic a change to enact without special consideration. Likewise the provision giving the shipper the right to route his traffic would remain applicable only to railroads; while there was no substantial change in the provision relating to liability for loss and damage (S. 2009's section 18) except the language to make it applicable to water carriers.

The reparations provisions would be confined to railroads, as is the case at present while the provisions relating to time limits on actions would fix such limits uniformly at 18 months; at present there is a two-year limit within which actions alleging unreasonableness of rates may be brought, and a three-year limit with respect to alleged overcharges. The proposal to increase the salary of the I. C. C. secretary from \$9,000 to \$10,000 was removed from Section 23 which deals with the commission and joint boards. Later on this section carries important changes permitting the commission to assign cases to individual commissioners or boards of employees who could be vested with authority to issue orders, such orders to be subject, as a matter of right, to review by a division of the commission. Appeals to the full commission from decisions of divisions would be only with the permission of the commission, working, as Senator Reed put it, somewhat like writs of certiorari in the courts.

The committee-of-six won a partial victory in its at-

tempt to require that any commission divisions be along functional lines; the bill provides that any assignment of work "relating to rates, fares, and charges" shall be according to the nature of the work and not according to the class of carrier. However the Bureau of Motor Carriers and Division 5 could continue to function with respect to all motor carrier matters save rates; and a water carrier bureau and division could presumably be set up on a similar basis. Another new provision in Section 23 is that authorizing the I. C. C. to approve travel and subsistence allowances for state commissioners cooperating with it in administering the Act. Retained in Section 25 is that provision authorizing carrier employees to intervene in proceedings before the I. C. C.; while the above-mentioned through-routes bill was written into Section 27. Section 28 embodies another change from existing law in its provision putting the burden of proof on a carrier in connection with any proposed change in a rate; at present such burden is specifically placed only in connection with proposed rate increases.

The present rate making rule remains with its application to all forms of transport, and additional language to make it clear that in considering the effect of proposed rates on the movement of traffic the commission shall have in mind only the effect on the movement via the type of carrier for which the rates are prescribed. The valuation provisions are extended to all forms of transport by giving the commission authority to make valuations of water lines and motor carriers whenever it deems such valuations necessary. Section 36 dealing with the issuance of securities has been broadened to apply to contract as well as common carriers; while the interlocking directorate provisions are made inapplicable to motor carriers.

The consolidation provisions are substantially the same as the present law except for repeal of the section directing the commission to promulgate the consolidation plan; there is no provision for compulsory consolidation.

The above-mentioned provision designed to expedite long-and-short-haul-clause procedures would authorize the carriers to file tariffs at the same time they file their applications for fourth-section relief. Then if the commission acted favorably on the latter within 30 days the rates could become effective without delay.

Board's Final Reports Due May 31, 1941

Section 51 brings all penalty provisions of the Interstate Commerce Act and the Elkins Act in one place, providing for a range in fines from \$100 to \$5,000. It is understood that this range, instead of separate provisions for each type of transport, was provided on the theory that the courts would consider the size and financial ability of the culprit carrier in meting out punishment. Section 52 provides for the above-mentioned investigation of interterritorial rates, while Section 53 is that providing for the studies by the three-man board appointed by the President. It calls for preliminary reports by June 1, 1940; final reports by May 31, 1941, when its authority would terminate. Section 54 carrying the saving clauses, repealing clauses, etc., notes the repeal of the Hoch-Smith Resolution but stipulates that nothing in it shall be construed to alter or diminish powers now vested in the I. C. C. by the Inland Waterways Corporation Act of June 7, 1924 (the so-called Denison Act).

The bill would become effective 60 days after its enactment, but the I. C. C. would have authority to postpone the taking effect of provisions relating to water carriers to such time as it shall prescribe, but not beyond April 1, 1940. Meanwhile Senator Reed told reporters

that Chairman Wheeler and himself would comprise a sub-committee of two in an endeavor to work out provisions for the regulation of freight forwarders.

Working the Iron Horse

(Continued from page 833)

Finally, may I show you two charts of performance and what has been accomplished in this detailed analytical study of why engines are sent to the enginehouse, and the results obtained when all of the officers involved assume their full responsibility as to operation with the minimum amount of power. These charts show you the average hours a certain class of power lays at the enginehouse, that is, from the time the engineman gets off of the locomotive until the outgoing engineman gets on the locomotive and takes charge of it.

You will note at this enginehouse the time (owing to the custom of having so many locomotives available at 8 o'clock every morning) was running about 10½ hours and after a meeting, such as has been described, it was decided that it wasn't necessary to have that many available at 8 o'clock in the morning, with the result that the average turning time was reduced to 7½ hr., a saving of 3 hr. per locomotive or of one locomotive day for each eight locomotives going through that house.

An analysis, according to the system described, was made at this enginehouse and it was decided that the turning time was too great. These figures, shown in another chart, are the average monthly figures for a considerable period. You will note that as a result of the meeting, the time was materially improved, but there is still a problem at that house which it may or may not be possible to solve, and that is, every Tuesday there is a surplus of power, and a study is being made to see whether it is practical to operate an extra train of empties on that date; whether it is practical to use these locomotives for maintenance-of-way work; or whether there is any other work perhaps performed by different classes of locomotives in that territory which locomotives of this class could do, keeping the other locomotives stored.

* * *

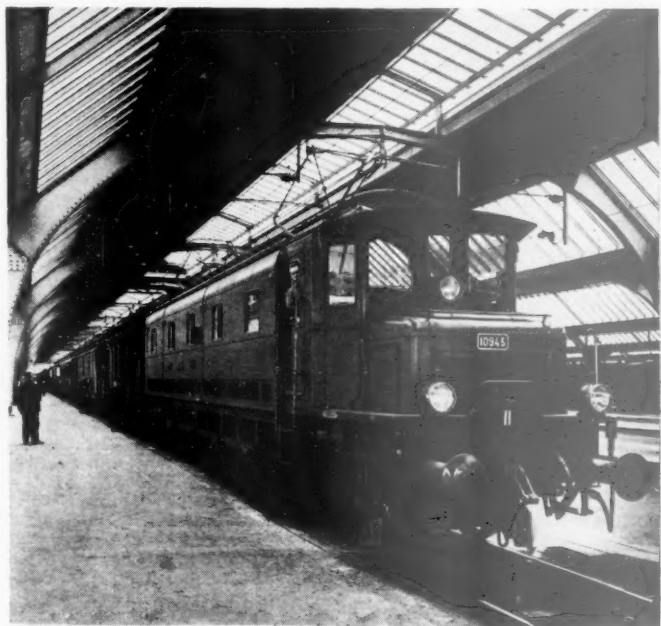


Photo by Information Bureau of Switzerland

A Swiss Federal Train Ready to Depart From the Zurich Station Shed

Hearings Continue on Railroad Reorganization Bills

Opposition increases on six-year standard and special court features—Fate of Chandler measure in doubt

WASHINGTON, D. C.

DURING the past week the Senate interstate commerce committee concluded hearings on S. 1869, Senator Wheeler's bill which would make extensive changes in section 77 of the Bankruptcy Act and create a railroad reorganization court, and began hearings on the Chandler voluntary railroad reorganization bill, H. R. 5407, which recently passed the House without a dissenting vote. Although the Chandler bill passed the House with no opposition, it appeared that it might run into several snags in the upper body before it was finally, if ever, enacted into law.

Strong opposition on the part of railroad security owners and certain railroad counsel became evident when the committee concluded hearings on S. 1869 on May 5. Following the trend of testimony given in last week's issue, witnesses representing the bondholders' groups and carriers now in the process of reorganization were unanimous in condemning the six-year standard of capitalization set up in the bill. There was also considerable opposition expressed to the idea of setting up a new court in Washington, D. C. to handle all reorganization cases.

Craven Opposes Measure

Leslie Craven, counsel for the Security Owners Association, testifying at the May 4 session of the hearings, told the committee that his group which is composed of life insurance companies and large institutional investors, wants a safe place for the investment of funds. Mr. Craven admitted that there had been mismanagement of certain railroads in receivership and that certain lawyers had not acted properly, but he was opposed to "any wholesale indictment of the legal profession." Mr. Craven was referring to the provision of the bill which prohibits a trustee from employing a general counsel of the old company in the same capacity.

Mr. Craven was also of the opinion that the six-year provision in the bill will not make a workable standard upon which to base the capitalization of reorganized companies. Instead, he would strike out any presumption as to the level of expectable future earnings and substitute as the standard the words, "probable future earning power."

Referring to previous testimony that the provision for the reorganization court had the support of Commissioner Eastman, Mr. Craven denied that this was the case. He told the committee that Commissioner Eastman had gone so far as to testify against it during hearings on the Lea omnibus railroad bill before the House interstate and foreign commerce committee. Senator Wheeler spoke up to say that the bill had been submitted to both Commissioners Eastman and Mahaffie, but the Montanan would not admit that Mahaffie had approved the idea.

On the subject of equity receiverships, Mr. Craven said that the bill is not clear as to the conduct of equity

cases before the new court. He wished to know whether they are to remain as equity cases or whether they are to be transmuted into section 77 cases.

Passing to the reorganization court, Mr. Craven said that he doubted its workability because of the vast amount of detail that it would be required to handle. Instead of the court set up under the Wheeler bill, he would prefer the Lea bill provision which, he said, would give the reorganization court control of the reorganization plan. But in the last analysis, his group does not favor a new court at all. His clients are of the opinion that the present system is working fairly satisfactorily and can be made to work better without setting up a new court. Having the court sit in Washington under the "eye of Congress" would be a bad thing, in his opinion.

The next witness was Eugene S. Taliaferro, associated with the New York City financial firm of Joseph Walker & Sons, and chairman of the protective committee of the Old Colony. Mr. Taliaferro told the members of the committee that he believed that before any plan of reorganization is filed, the Interstate Commerce Commission should fix a base figure of probable future earnings so that all drafters of reorganization plans would have some common ground to start out from. He also favored the creation of a reorganization court.

Taliaferro Discusses Leased Lines

Mr. Taliaferro was interested in leased lines in reorganization and suggested amendments to the bill relating to the handling of leased lines in reorganization cases where leases were rejected by the lessee, to the end that the leased property might be liquidated or kept in operation. He pointed out to the committee that inequities arise because of the fact that a debtor company can reject a lease of a line and then continue to operate it under the order of a court for the account of the lessee with the result that if the line is unprofitable per se, deficits will pile up against the lessee. These deficits are paid off in the form of receiver's certificates which are a first lien on the property and come before the first mortgage bondholders. As a result, he pointed out that in the case of the Old Colony which is being operated by the trustees of the New Haven, the property is gradually being taken from the bondholders of the Old Colony by the New Haven due to deficits piling up each year. Mr. Taliaferro would favor immediate liquidation of the leased line once the lease is disaffirmed by the debtor company.

E. G. Buckland, chairman of the board of the New Haven and the New York, Ontario & Western, testified briefly, saying that he did not believe the three-man court could handle all the work that would be required of it. Instead, he thought the Congress could accomplish everything that the bill tries to accomplish if it gave the

Circuit Courts of Appeal the powers proposed to be given to the reorganization court.

The last witness at the May 4 session was Edward H. Leslie, a member of the New York bond house of Wood, Struthers & Co., and chairman of the reorganization committee of the Mobile & Ohio. Mr. Leslie wanted a provision in the bill which would salvage the work that has been done in the M. & O. reorganization case and its proposed merger with the Gulf, Mobile & Northern, action on which is now pending with the commission. Senator Wheeler assured him that the committee would look into this matter.

The witnesses at final session of the hearings on S. 1869 were Marcus L. Bell, general counsel for the Chicago, Rock Island & Pacific; Judge R. V. Fletcher, vice president and general counsel for the Association of American Railroads; Fairman R. Dick, appearing on behalf of the Transportation Association of America as the chairman of its research committee; and James Emery Brooks, a civil engineer of Glen Ridge, N. J.

Rock Island Counsel is Heard

Mr. Bell began by saying that he believed the reorganization court should have the power to determine priorities. He would have the court created by the Chief Justice out of the present District and Circuit Court judges instead of setting up a new court, saying that there are many District judges who would be well qualified to sit on this court.

Commenting on the railroad problem generally, Mr. Bell said that the Railway Labor Act needs revision and that the railroads need this relief more than they need anything else. Senator Wheeler assured him that there might be something to the charge that the adjustment boards are one-sided and preclude the carriers from the right of appeal.

Mr. Fletcher told Senator Wheeler that his sole purpose in appearing before the committee was to support the recommendations of the committee-of-six on the subject of railroad reorganizations. The recommendations of the committee-of-six on the reorganization court were contained in H. R. 4862.

Instead of giving the reorganization court jurisdiction over all reorganization matters, Judge Fletcher would have the proceedings first filed in the District Court and then give the reorganization court the power to handle only those matters which directly deal with reorganization. Also, he would prefer five judges to three which the bill calls for. He thought that the bill contained language which "would largely destroy the effect of the Chandler bill," and he hoped that this language would be deleted so this situation might not obtain. He opposed the six-year standard for capitalizations set up in the bill.

Dick Approves and Disapproves

Mr. Dick approved certain features of the bill and opposed others. He began his testimony by telling the committee that the bill marked not only a new approach to a solution of the railroad credit problem, but translated into law for the first time what seemed to him to be basic principles which must be clearly recognized before the transportation industry could be restored to sound financial health.

He objected to the six-year provision for determining capitalizations, telling the committee that as drafted the bill would defeat the purpose that it was intended for, namely, to provide sound financial structures for reorganized railroads. The fundamental fallacy of the phil-

osophy of the bill, as he saw it, was that it contemplated maintaining financial stability in the industry by raising money from investors at four or five per cent and investing it in a railroad that could earn only one per cent.

Mr. Brooks appeared as one who had deposits in savings banks and held insurance policies. He opposed the bill as inimical to the interests of such investors because of the provision for a reorganization court.

Hearings Begun on Chandler Bill

Hearings on the Chandler bill, H. R. 5407, which recently passed the House and which provides for voluntary railroad reorganizations, were begun before the Senate interstate commerce committee on May 10. Senator Wheeler presided and Senators Gurney, Republican of South Dakota; White, Republican of Maine; and Tobey, Republican of New Hampshire were in attendance.

The first witness was Judge R. V. Fletcher, vice president and general counsel for the Association of American Railroads, who undertook to explain the bill in detail. Judge Fletcher announced at the beginning of his testimony that he was appearing on behalf of the A. A. R. and in advocacy of the measure. Senator Wheeler asked whether or not the measure as passed by the House was a "moratorium" on railroad debts. Judge Fletcher did not think that this was the case. He went on to explain that the bill was a composition statute and was based on the bankruptcy power in the Constitution. He also pointed out that the bill was aimed toward those borderline cases where railroad companies are just on the verge of bankruptcy.

Senator Wheeler raised the question of whether or not a railroad now in the process of reorganization under section 77 of the Bankruptcy Act could have its petition dismissed and attempt to reorganize under the provisions of the bill. Judge Fletcher replied that the bill specifically provided that a road could not avail itself of the bill's provisions until it had gotten out from under section 77. He added that he could not conceive of a court dismissing a section 77 proceeding unless such action was in the public interest. "I can conceive of a lot of these district courts doing things which are not in the public interest," replied Senator Wheeler.

Senator Wheeler seemed fearful that passage of the bill might permit roads now in trusteeship to have that petition dismissed and try a reorganization under the Chandler bill. His idea was that those roads now being reorganized needed to be drastically scaled down in their capitalizations and should not be permitted to simply postpone their obligations under a "moratorium" statute.

I. C. C. Views on Bill

Senator Wheeler then introduced into the record a letter from Commissioner Eastman in his role as chairman of the legislative committee of the Interstate Commerce Commission, in which the latter expressed the commission's views on the pending measure.

"It appears," wrote Commissioner Eastman, "that it is the intent of the bill to sanction moratoriums for railroad companies which are unable to meet their debts or in other words to permit payments of interest or principal to be postponed for a time without in any way extinguishing or modifying the right to institute collection. Such a plan can be justified only on the theory that the railroad company is passing through a temporary

period of low earnings which will be succeeded, at no very distant date, by a return to high or comparatively high earnings, for unless this happens, nothing will be accomplished except to defer the evil day and make it worse when it finally arrives."

"As to some railroads there is certainly as much reason to guess that there will not be as that there will be a return to high or comparatively high earnings. If there is no such return the ultimate state of the creditors or of a railroad after such a moratorium as H. R. 5407 contemplates, will not be better but on the contrary will be worse." Commissioner Eastman went on to say that the effect of the bill might be to continue the policy of staving off reorganization of roads which should be reorganized.

Concluding his letter to Senator Wheeler, Mr. Eastman said that "We are in accord with the objects of the proposed legislation as explained in the report of the House committee on the judiciary. If the bill is amended so as to exclude railroads in receivership and to make clear the intent of Congress that the commission shall, in connection with applications hereafter filed with it, pass upon the basic merits of proposed plans of adjustment, we believe that the bill might in some instances serve a useful purpose."

Later in the hearing Senator Wheeler explained that the bill was drafted to take care of the Baltimore & Ohio's voluntary plan of adjustment of its debts. He went on to say that he looked on the bill as an emergency one and that he opposed it as a longtime principle.

Berle Criticizes Measure

A. A. Berle, assistant secretary of state and former special counsel to the railroad division of the Reconstruction Finance Corporation, was the only witness at the afternoon session. He told Senator Wheeler that he appeared on his own behalf but that his views were endorsed by the R. F. C. Mr. Berle reiterated what Senator Wheeler had said at the morning session to the effect that the bill was drafted primarily for the B. & O. and the Lehigh Valley and that it was a composition statute.

Mr. Berle had several criticisms to make of the bill as passed by the House. In the first place he was afraid that roads which are now in the process of reorganization under section 77 would try to have their cases dismissed and attempt to reorganize under the bill. In this way, he felt, the work already done by the commission would be lost. Senator Wheeler assured him that if he had anything to do with the bill, such would not be the case.

Specifically, Mr. Berle said that the composition plan arranged under the bill did not have to have the approval of the commission. This, he objected to. Also, he did not like the fact that the bill does not permit a court to appoint a receiver or trustee while the road is adjusting its capital structure. He also criticized the bill because it was passed by the House in such a "hasty manner" with no analysis given to it.

Also, Mr. Berle would like to have a provision in the bill which would say that any decisions of the three-judge court should not be regarded as a precedent for other district judges who are handling railroad reorganizations under section 77. The reason for this, he felt, lay in the fact that the reorganizations under the Chandler bill would be compositions while those under 77 need not be. The fact that the bill makes no provisions for the control of fees for counsel and others employed in the case did not sit well with the assistant secretary of state. He would place this control with the commission as it now is in section 77 cases.

Lastly, he would amend the bill so that it would apply

only to the B. & O. and the Lehigh Valley, thus closing the door to any more such voluntary reorganizations. Senator Tobey wanted to know why Mr. Berle would discriminate in favor of these two roads. Mr. Berle did not think it was wrong to deal with these two roads in view of the fact that they have done considerable work on their plans. Senator Tobey thought that the committee should tackle the whole railroad problem instead of trying to keep the B. & O. out of receivership. Mr. Berle agreed, but he pointed out that to solve the entire railroad problem would require great courage and almost superhuman intelligence. It also would open up the question of motor competition and its attendant problems, he continued. Senator Wheeler agreed that one could not get very far in solving the railroad problem in its entirety because of the reaction of the public, but that all one can do is to take a little step in the right direction.

Senator Neely, Democrat of West Virginia, objected to passing legislation for two roads and excluding the rest. He felt that it would be impossible to get it through the Senate. Judge Fletcher felt that the Senate might pass it, but he feared that it would not be possible to get the House to agree to such a limited bill.

Berle Favors Consolidated Bill

Mr. Berle closed his testimony by saying that he hoped the committee would report out S. 1869, the reorganization court bill with the Chandler bill as an amendment to it and add a chapter to the bill permitting the R. F. C. to aid in the financing of reorganized companies. Under this set-up, he would have the composition plans of the B. & O. and the Lehigh Valley passed upon by the special reorganization court instead of by the three-judge court provided for in the original Chandler bill.

At the close of the day's hearings, Senator Wheeler placed in the record a letter from Robert E. Healy, acting chairman of the Securities & Exchange Commission, which said that the commission opposed the enactment of the bill. Mr. Healy's letter said that the commission did not "believe that improvement in reorganization procedure lies in the direction taken by the provisions of this measure."

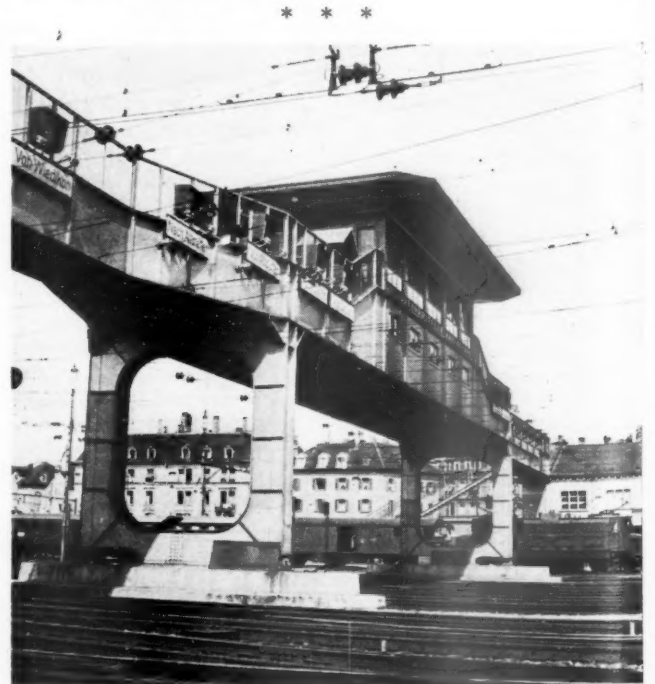


Photo by Information Bureau of Switzerland

This Switch Tower Was Recently Installed by the Swiss Federal Railroads at Zurich

Railways Largest Buyers in Canada



A Canadian National Purchasing Office

Role of Canadian Pacific and Canadian National as consumers shown in discussion of supply methods

THE Canadian Pacific and the Canadian National have an importance to Canada as consumers of materials and as factors in maintaining employment which may be even greater than the corresponding relation of the railways of the United States to prosperity in this country. This was brought out in an address by E. A. Bromley, assistant to vice president, Canadian National, before a recent meeting of the Canadian Railway Club at Montreal, Que. At this meeting, which was devoted to the supply work and problems of the Canadian railways, Mr. Bromley also explained the purchasing policies and methods of the Canadian National and was followed by T. Fawcett, general storekeeper, Canadian Pacific, who described the principles of rationing and allowances used in Canadian Pacific storekeeping and made suggestions for the more effective control of the material. The two papers, with some rearrangement in detail, are presented in part as follows:

Canadian Railways as Buyers

By E. A. Bromley*

During the last ten years, the Canadian National and the Canadian Pacific purchased \$1,175,000,000 of material and supplies, which is an average expenditure of \$117,500,000 per year or \$223.55 per minute. They sold over \$50,000,000 of iron and steel scrap during the same period. They are the largest buyers in Canada and their purchases are made with thousands of firms in the United States, Great Britain and other countries, as well as in Canada.

The largest expenditures are for fuel—the purchases for these supplies amounting to \$30,000,000 to \$35,000,000 per year, including 8,000,000 tons of coal. This

is equal to 200,000 car loads, which, if placed end to end in a single train, would extend from Halifax, N. B., to Chicago, Ill.—a distance of 1700 miles. Approximately 0.3 of every ton of coal produced in Canada is purchased by the two railways. Since there are roughly 27,000 men employed in Canadian coal mines it follows that 8,000 miners in Canada are engaged solely in producing coal for the two railroads.

The Canadian National and the Canadian Pacific are also large users of forest products. The expenditures for this material amount to approximately \$13,500,000 per year, including approximately 10,500,000 cross ties. This is equivalent to approximately 170,000,000 cu. ft. of standing timber. Since over 240,000 men are employed in Canadian timber production, the railways of Canada may be considered to support 15,000 woodsmen or 1 in every 16 so employed.

Purchases Vital to Canada

It is estimated that 70,000 people are gainfully employed in Canada in producing materials and supplies used by the Canadian National and the Canadian Pacific, and that the railways' annual purchases result in further employment of not less than 175,000 persons, through the re-distribution of purchasing power. Thus directly and indirectly, the railways' purchases in Canada provide employment for approximately 245,000 persons.

It is the policy of the two railways to obtain as large a part as possible of their material requirements in Canada, so that by far the greater bulk of the money spent for materials and supplies remains in Canada. There are, of course, certain commodities which are not made in Canada; such as fire box steel, steel plate in large sizes, certain sizes of boiler tubes, etc., and these are purchased either in Great Britain or the United States at the lowest delivered prices at Canadian ports,

* Assistant to vice-president, Canadian National, Montreal, Que.

after taking into consideration all charges, including duty and taxes. No organization has done as much to foster Canadian-made goods as the railways of Canada. They are constantly seeking to induce Canadian manufacturers to take up the manufacture of articles that must otherwise be imported and their efforts in that connection have been highly successful.

The two systems have purchasing agents located strategically across the country from coast to coast, and it is the aim to buy from local suppliers to as great an extent as possible, in conformity with sound business principles. By this means local industry and business in the various communities are stimulated. Furthermore, better deliveries are obtained, thus enabling the railways to keep their inventories at lower levels. Contracts and price arrangements are made at headquarters for a large number of items and the local purchasing officers place

use as much Canadian coal as they do. The subsidy on Nova Scotia coal used by the railways is based on the difference between the laid-down costs of Canadian and imported coals, but on the Alberta coal it is a certain proportion of the commercial freight rate and is restricted to an area east of Winnipeg.

To prevent decay the railways treat several million ties with creosote oil each year, necessitating the purchase of millions of gallons of this preservative. This treatment increases the cost of the ties but, on the other hand, it greatly increases their life, so that, in the final analysis, it is well worth while.

The railways in Canada have to haul one ton of freight 95 miles to earn enough money (gross) to buy an ordinary coal scoop, 175 miles for a hand lantern, 667 miles for a 200-lb. keg of spikes, 5,777,574 miles for a day coach, and 8,337,205 miles for a dining car. Therefore, if the railways are to distribute vast sums of money for purchases and wages, they must be permitted to prosper.



At the Angus Store of the Canadian Pacific—Birthplace of Container Methods for Shipping Materials

their orders against these arrangements, except for certain authority in buying miscellaneous commodities.

In order to get the best prices, competition is encouraged. Tenders are invited from those who can meet the requirements and the materials and supplies are covered by specifications so far as possible. Materials bought to specification are then inspected and tested before they are accepted. Some of this work is performed by the railways' own forces and some of it by outside concerns.

Subsidy for Canadian Coal

The policy of the railways is to use as much Canadian coal as is economically possible, since the railways are by far the largest users of Canadian coal and without their support the coal mining industry in Canada would have difficulty in surviving. Coal deposits are available in Nova Scotia and New Brunswick, but no coal suitable for locomotives has been discovered between the Maritime Provinces and Alberta where suitable coal is again found in abundance. This leaves a large gap, including Ontario and Quebec, the territories of largest consumption, into which large quantities must be moved. Nova Scotia coal is used as far west as Ottawa, Que., and Alberta coal as far east as Winnipeg, Man. The intermediate territory is supplied with coal from the United States.

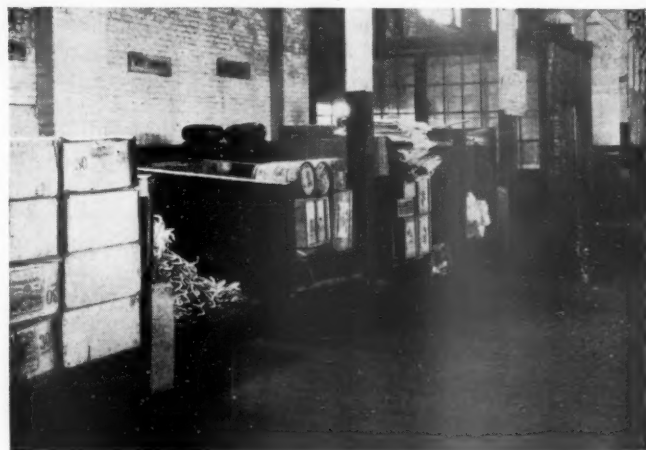
The Dominion Government has granted certain subventions (subsidies) to the mines to enable them to compete with imported coal. If this assistance were not granted, it would be impossible for the railways to

Storekeeping on the Canadian Pacific

By T. Fawcett*

The stock books at the Angus store of the Canadian Pacific, in Montreal, contain about 25,000 different items, exclusive of probably 10,000 special items, and the territory served extends from Halifax, N. S. to Port Alberni, on the West Coast of Vancouver Island, B. C.

In addition to the routine work of maintaining stocks, receiving and storing goods, and distributing them on



Material for Shipment to Local Stores on the Canadian Pacific

approved requisitions, the store department of the Canadian Pacific makes as many spot checks as possible of cabooses, engines, auxiliary outfits, section toolhouses, watertanks, stations, standpipes, bridge and building shops, signal maintainers and linemen's premises, round-houses, freight sheds and all other places where material is used. The large shops are checked each year, and every terminal on the system is covered in detail at least once a year.

Six Pillars of Storekeeping

The administration of the stores is based upon centralized control of material, centralized stocks, standardization, exchange of material, rationing, and allotments.

* General storekeeper, Canadian Pacific, Montreal, Que.

The first two go hand in hand. Centralized control results in centralized stocks, so that all departments using common material can be fed from one source. Standardization of the materials naturally follows.

The exchange principle of stores administration requires the return of the discarded article before a new one is issued. This insures that the original article has been used in the company's work until it is no longer serviceable and that it is returned to the stores for repairs, if repairs are possible, or to obtain the scrap value.

Rationing consists in having the using departments make a survey of the quantity of material necessary to perform a given piece of work, after which the stores watch to see that the allowance is not exceeded, and notify the head of the proper department where it is exceeded. About 1921, the cost of kerosene on Western

basis of the information obtained by listening to men who do the hardest kind of work, who actually use the material, and who will cooperate once their confidence is gained. That confidence can only be earned by a steadily satisfactory stores service. When users are convinced by the quality of service that the stores mean to co-operate, they will no longer hoard surplus material against an expected shortage, and they will also do the things they are asked to do in conserving the expenditures of the railroad.

New Books...

Adjusting Your Business to the New Legislation, prepared by Leo M. Cherne. 1065 pages. 9½ in. by 7 in. Published by the Tax Research Institute of America, Inc., New York. Price \$12.85.

Here is a volume designed to acquaint the business man with the ins-and-outs of recent federal and state legislation as they affect his particular concern. Prepared as a loose-leaf volume for ease in distributing pages to members of the staff and for filing, each of its 1065 pages devotes one column to the important clauses of each law under discussion while the remainder of the space contains observations and recommendations thereon prepared by a staff of experts retained by the Tax Research Institute.

Of particular application to the railroad industry is a section devoted to the Interstate Commerce Act and certain discussions pertaining to the minimum wage provisions of the Wage and Hour law. This material does not seek to discuss the laws critically or to evaluate them philosophically, but rather to help the business executive who must put up with them. The book attempts to answer any possible question as to definitions, penalties, compliance, application to certain classes of employees, etc. The whole is well annotated and indexed for quick reference.

America Reborn, A Plan for Decentralization of Industry, by Ralph L. Woods. 376 pages. 8 in. by 5½ in. Bound in cloth. Published by Longmans, Green & Co., London, New York, Toronto. Price \$3.

This book is a spirited indictment of the so-called "lopsided" industrial development of the United States with respect to regional distribution, a criticism of large cities, and a plea for gradual and natural decentralization of industry and population. It is written by a member of the traffic department of the Sinclair Oil Company of 16 years' experience in traffic work. A frequent contributor of articles to such publications as "Nation's Business" and "World's Work", Mr. Woods attains in his writing a racy style unusual in economic discussion and is master of the apt illustration.

It is to be regretted that he did not draw more extensively on his traffic background for the material of this book. While the first few chapters hint at an extensive knowledge of such intricacies as geographical distribution of industry, regional freight rates, and population inertia, the remainder of the book becomes rather a social document concerning the general waste and uselessness of "metropolis" in the manner of Lewis Mumford, New Deal "regionalists," and other such Utopians.

Mr. Woods makes the assertion that the spread of industry from the congested East to the South and West was "to a great extent frustrated by the willful corruption of the railroad rate structure"; that the roads have always given undue advantage to large shippers at important points, thus helping to freeze as well as create crowded urban centers. He devotes a score or so of pages to the peculiarities of the railroad rate structure and proves himself adept at culling the most glaring absurdities from tariff sheets. But, in the light of detailed arguments raised by defendants in the current controversy over alleged discriminations against Southern manufacturers in inter-regional rates, he fails to make a very convincing case for his contention that the South and West are rate "step-children."

While only a portion of the book pertains strictly to transportation matters, it does present an able partisan brief for a decentralizing movement which, as the railroads know, is serious enough already.



Material Storage at Battle Creek, Mich., on the Canadian National

Lines was approximately \$135,000 per year. An exhaustive survey of all lamps on Western Lines using this oil was made and after experimenting for a year, a ration was approved, which is still in effect. This ration, after making allowance for the drop in price, produced an annual saving of approximately \$35,000 per year.

The allotment principle is applied by prescribing the tools and other materials necessary for the operation of various items of equipment, or gangs of men. Approved lists are maintained, showing what is authorized for a locomotive, a caboose, a baggage car and auxiliary equipment; section toolhouses use a card showing the authorized equipment for section gangs of varying sizes.

A stores officer should not expect to be popular. He has no favors to bestow. It is his business to see that each user obtains the material he needs but nothing beyond that. However, a storekeeper can earn respect for the department by the quality of the supply service rendered and by willingness to be helpful beyond the immediate scope of his duty.

Another thing the storekeeper must do, is to travel. The more travelling done, the better the results will be. He should get an inspection track motor and have the superintendent, the bridge and building master, and the roadmaster go with him. Stations, section toolhouses, watertanks, culverts, engine houses, car repairer's boxes and grain loading platforms should be inspected. Every working gang should be visited to see that its tools are in good condition. If not, the supply cars are not giving the service they should. Notes should be made of complaints or remarks which indicate where improvements can be made. One hundred miles per day, exclusive of terminals, is a good day's work.

At the end of a week, the storekeeper should return to headquarters and try to improve the service on the

NEWS

Canadian Roads Must "Co-operate"

Their problems can be solved without any new laws, is government view

Agreed charges and more determined efforts of the two railways to act on the 1933 legislation providing for compulsory "co-operation" are the two steps which point the way to an alleviation of the Canadian railway situation, according to Raoul Dandurand, government leader in the Senate at Ottawa. The Senator expressed this opinion in a statement to the special railway committee when he gave reasons for opposing the motion of Senator Arthur Meighen, Conservative leader, calling for further study of the two railways' affairs by an independent committee of engineers and accountants, presumably from the United States. Senator Meighen was reminded by Senator Dandurand that the Conservative party, of which Meighen was once leader and Prime Minister, at its national convention last July reaffirmed its opposition to unification of the Canadian National and the Canadian Pacific, but Mr. Meighen said he was not bound by that convention's action. He denied he favored unification, but he demanded to know what other solution there was to the problem.

Senator Dandurand's statement is an authoritative pronouncement of the present government's policy and its attitude toward the railway situation. Mr. Dandurand pointed out that high wages was one obstacle to railway improvement. Another was steadily increasing highway competition. "This situation," he said, "is now in a fair way to be corrected by the 'agreed charges' through the Act authorizing the railways to make agreements with shippers for the movement of their entire output, both long and short haul, at rates which should enable the railways to compete with highway transport." Senator Dandurand addressed a lecture to both roads in this language:

"Now I desire to impress upon the officials of the two systems my view as to what should be their policy in the matter of reducing expenditures. As a matter of fact, they need no outside expert advice. They themselves know thoroughly what can be done. No one knows better than they do—if they have the will to do it. I have high regard for their knowledge, their competency, and their efficiency. They have been given an instrument by Parliament which, if so inclined, they can utilize to the

Amlie May Get Justice Department Job

Thomas R. Amlie will probably be offered a position as an attorney in the Department of Justice's Lands Division in his home state of Wisconsin, Attorney General Murphy revealed at his May 11 press conference. The Attorney General said that he knows Mr. Amlie and "his qualities and abilities, and will be glad to assign him." Mr. Amlie is the former representative from Wisconsin whose nomination for appointment to the Interstate Commerce Commission was recently withdrawn by President Roosevelt when a Senate fight threatened on confirmation following criticism of the nominee as a radical and alleged Communist.

full, and with which they can largely work out their own salvation. That instrument is the Act of 1933. Do the railways want to save themselves? Does the Canadian Pacific Railway want to maintain its autonomy? I am sure it does, but I warn it that its campaign for unification, if continued, will inevitably lead the public mind towards State ownership, should that railway find itself unable to carry on under present auspices, and under the remedy provided by Parliament in the Act of 1933.

"Unification of Canadian railways under private management is not possible and will not take place. The Government is trying to smooth the road towards greater co-operation by introducing legislation looking for more considerate treatment of employees dislodged as a result of co-operative measures, and that should make possible the speeding up of co-operative activities which this Committee recommended in its interim report presented at the end of last session.

"I feel that the time has come to speak plainly to the men who have been accustomed—in their days of prosperity—to speak haughtily and with seeming disdain, of the men who have been endeavouring to direct the ship of State. They must now be prepared to practice modesty, to drop their pride, and that other attribute of which we have heard so much before this Committee, namely their prestige. They can, if they so desire, go a long way towards their goal as the public authorities and the public in general are most desirous of helping them on the line which an Act of Parliament has already laid down for their guidance."

Federal Barge Help on Strike

Uncle Sam turns out to be no union pal when he takes on boss role

That government ownership is no cure for labor disputes and violence is being demonstrated in the strike of 3,500 Federal Barge Line employees, called on April 27. In this strike, the worst ever experienced by the barge lines, twenty-three towboats and their barges, together with more than 100,000 tons of merchandise, are tied up at ports along the Mississippi river between New Orleans and Minneapolis. Considerable violence has been reported.

The strike of boatmen and dock workers was called on April 27 by the General Council of River Workers, representing the International Longshoremen's Association of the American Federation of Labor and the Inland Boatmen's Division of the National Maritime Union of the Committee for Industrial Organization, following a break-down of negotiations which began a month ago. The crew members on strike include oilers, deckhands, firemen, mates, watchmen, cooks, mess boys and laundresses. As a result, the Federal Barge Line has issued embargoes and freight is now moving by rail or other barge lines.

The strike was called suddenly upon the failure of negotiations that had been under way for a month in an endeavor to work out a new contract to supplant one which expired on April 1. The General Council of River Workers, representing employees of the A. F. L. and C. I. O. unions, in seeking a new labor contract, demanded a closed shop; that the company hire boatmen and dock workers from lists furnished by the unions; that wages of boatmen be increased from \$80 to \$130 a month; that wages of dock workers be increased 15 to 20 cents an hour; and that employees be granted a reduction in hours. During the negotiations, the union's committee modified its \$130-a-month demand for boatmen and offered to accept a month's vacation with pay each year in lieu of a reduction in hours.

In a counter proposal, which was rejected, the line offered to recognize the two unions as bargaining agents on an open shop basis. The proposal promised non-interference with union employees and sought non-interference by the unions with

(Continued on page 848)

Travel Salesmen Tell Dull Story

Survey rates ticket sellers
higher than lumber and
merchandise salesmen

A rating of 78 per cent on the performance of service and selling was given salesmen in the passenger departments of the railroads by James R. Ozanne, a merchandising and personnel counsel, at the fourth annual "get-together" sales meeting of railroad passenger traffic department representatives at Chicago on May 8. This rating, he said, was based on a survey made by his company involving 200 personal calls on ticket sellers and 140 telephone calls. This, he said, compares with a rating of 70 per cent for retail lumber yards, 75 per cent for department stores, 77 per cent for restaurants, 81 per cent for laundries and dry cleaners, 84 per cent for grocery stores, 84 per cent for hotels, 86 per cent for gasoline filling stations and 91 per cent for airlines.

The 78 per cent is an average of the ratings of eight factors considered in salesmanship, one of which involves the salesman's appearance, his greeting and the manner in which he answers the telephone. Of the 200 salesmen called upon, 72 "just looked," while only 19 actually smiled. When the telephone was used, the majority of salesmen made the caller wait, 7 replied with the statement, "where do you want to go," and only 21 per cent made the caller feel welcome. As a result, Mr. Ozanne gave a rating of 88 per cent for first impression.

Office appearance, including orderliness, attractiveness and colorfulness, was given a rating of 85 per cent; alertness, consisting of prompt attention, waiting upon customers in turn, delayed action due to personal conversation and indifference, was given a rating of 75 per cent; and courtesy, 95 per cent. The classification, facts about the goods, he said, was of interest because, while the salesmen had the knowledge, rating 95 per cent, they did not make an interesting presentation, rating only 45 per cent or an average of 70 per cent for the classification. Enthusiasm, the survey indicated, was low, the rating being 62 per cent, while the "sell," which he said was made up of convincing arguments, the solving of individual travel problems and definite and immediate suggestions for a ticket and reservation was rated at 64 per cent. The treatment of customers after the sale was made received a rating of 85 per cent.

The meeting was attended by more than 900 salesmen in the Chicago area, and 159 officers of the passenger traffic departments of the railroads of the country. A program of music and singing was augmented by several speeches, including one by C. Wayland Brooks, an attorney, and another by George Kelly, vice-president of the Pullman Company. Mr. Brooks' subject was "America Wants to Know," while Mr. Kelly discussed the sales and advertising campaign of the Pullman Company. This campaign, according to Mr. Kelly, has been most successful in securing increased pa-

tronage and stimulating salesmen. The car-naming contest conducted in connection with the advertising program has so appealed to the public that several hundred thousand entry blanks have been called for by agents throughout the country, including those in the smallest towns. According to reports from some agents, the contest has brought persons into railroad ticket offices who have never been there before.

N. Y. Railroad Club Annual Outing

The New York Railroad Club will hold its annual golf field day and dinner on June 8 at the Westchester Country Club, Rye, N. Y.

Traffic Clubs Will Meet at San Francisco

The semi-annual convention of the Associated Traffic Clubs of America will be held at the Palace Hotel, San Francisco, Cal., on June 26 to 28.

Club Meeting

The Railway Club of Pittsburgh will hold its next meeting at the Mellon Institute of Industrial Research, Pittsburgh, Pa., on May 25 at 7 o'clock. Dr. L. W. Bass, assistant director of the Institute, will address the club on "Industrial Research in the Transportation Field."

I. C. C. Practitioners to Meet at San Francisco

The Association of Practitioners before the Interstate Commerce Commission will hold its annual convention at the Palace Hotel, San Francisco, Cal., on June 29 and 30.

I. C. C. Dismisses Automatic Hose Connector Case

The Interstate Commerce Commission has dismissed "for want of prosecution and without prejudice" the long-pending automatic hose connector case—Docket 21996, Laughlin v. Aberdeen and Rockfish Railroad Company, et al.

Oral Argument on Estimated Weights on Citrus Fruits

The Interstate Commerce Commission has set June 9 as the date for oral argument at Washington, D. C., in the case involving the proposed revision of estimated weights on citrus fruits. Examiner Paul O. Carter's proposed report in this case (I. & S. Docket No. 4511) was reviewed briefly in the *Railway Age* of April 29, page 751.

Transportation Club of Louisville to Honor Tobacco Industry

The Transportation Club of Louisville, Ky., will hold its annual spring dinner on May 23 in the Kentucky hotel in honor of the tobacco industry. The guest speaker will be E. R. Oliver, traffic vice-president, Southern. The toastmaster will be T. T. Harkrader, director of traffic for the American Tobacco Company and past president of the Associated Traffic Clubs of America.

Mergers Urged at N. Y. Parley

Cunningham says roads ought
to save where they can be
before seeking help

Representative viewpoints of management-labor, I. C. C.'ers and security-holders on railroad policy for the future were each upheld in four talks delivered during the first session of a three-day economic conference called by the National Association of Mutual Savings Banks in New York beginning May 10. W. Averill Harriman, chairman of the Union Pacific, approached the railroad problem from both the management and labor point of view; Marion S. Caskie, chairman of the Interstate Commerce Commission, discussed chiefly the degree of discretion of railroad operation which remains in the hands of management and the necessity for making railroad securities attractive to investors; Henry Bruere, president of the Bowery Savings Bank, New York, and chairman of the committee on railroads of the National Association of Mutual Savings Banks, analyzed legislation proposed by the Committee-of-Six from the institutional investors' side of the picture; and William J. Cunningham, professor of transportation, Harvard Graduate School of Business, took the bondholders' angle.

Mr. Harriman expressed optimism on the legislative program for railroads of the Committee-of-Six, saying that the roads were rendering better service than ever before; that the public has a better understanding of the service and that he believes in the future of railroad securities at present market values. To this he added: "But perhaps my optimism is based more firmly on the improved relationships of railroad management with its labor. Of course, there are many disagreements between management and labor, but there is an increased realization by labor that their prosperity depends upon the prosperity of their company and their industry. The national unions are working more and more toward throwing their weight behind policies to promote sound solution of the railroads' problems."

The speaker also gave his whole-hearted support to the recommendation of the Committee-of-Six that initiative in the matter of consolidation be restored to the carriers. Reviewing the blow to railroad mergers dealt by the "trust-busting" campaign in the early part of the century, the Union Pacific chairman expressed the belief "that if mergers had been allowed to go ahead in their natural course, without political interference, we would today have substantially only four great railroad systems in the West—the Northern lines, the Union and Southern Pacific, the so-called Gould lines, and a system developed around the Santa Fe. Useless and extravagant competitive building would have been avoided, the cost of transportation today would be lower, and the railroads of the West in better position to serve the economic interests of the country." On the other hand, he declared

himself in favor of the retention of competition between main terminals.

Commissioner Caskie discussed the question of management-control and reduction of indebtedness. Concerning the first topic he declared: "There is gross exaggeration in the idea that every act of the railroads is subject to regulation. The railroads have a large degree of initiative in the making of their rates, and freely have made a multitude of reductions to meet competition. There is only limited regulation of their freight service, and the management of most of their affairs is not under government supervision."

Here he also took a poke at the demands of management for higher rates. Said he on this question: "The railroads have made much of the fact that average ton-mile revenue fell each year from 1923 to 1937, and in the latter year was only 31.5 per cent above the 1916 level. Such comparisons are misleading, for the fall in the average since 1923 has been caused largely by the fact that in recent years the railroads voluntarily reduced many rates to meet highway, water and pipeline competition, and have increased the severity of competition between themselves. The rates, however, on the traffic which still is affected little, if at all, have remained up. It is of these non-competitive rates that shippers complain."

As for reduction of bonded indebtedness Mr. Caskie asserted categorically that indebtedness has not been the primary cause of railroad distress and that reduction of the indebtedness would not go to the root of the matter. "The holders of railroad bonds with few exceptions, and many of the holders of railroad stocks, bought their securities for purposes of conservative investment. No one can contemplate the wiping out by reorganizations of the equities or interests of large groups of such holders, without keenest regret." He also urged that consolidation or co-ordination or a combination of both be pursued as an opportunity to combat waste.

Professor Cunningham blamed a considerable portion of the railroads' troubles on the excessive "corporate individualism" of managements which blocks effective co-ordination and abandonment of excess facilities. It was his belief that the bondholders can do much to minimize such wasteful individualism. Pointing out that the value of railroad property now depends almost entirely upon earning power, which in turn depends upon success in meeting competition, rates and costs of operation, the speaker referred to the field of consolidation as the chief means of increasing earning power which remains in the hands of railroad management. Admitting that one reason for the failure of the carriers to carry out the economies explored by the Federal Co-ordinator is the employees' dismissal agreement, Professor Cunningham nevertheless was of the opinion that the more important reason was "the state of mind of the executives of the individual railroads who resisted projects which, advantageous to the railroads as a whole, might require them to concede competitive advantage in any degree."

Elaborating on this theme he said "There is ground for the criticism that railroads should not expect to receive sympathetic

support from the public in the plea for more net income in the legislative proposals now under consideration by congress, when an opportunity to save large sums by co-ordination and elimination of wasteful duplication of facilities and service is blocked by the selfish interests of individual companies which refuse to concede or modify an advantage when concession would be of unquestioned benefit to the railroads as a whole and would reduce the total cost of rail transportation."

Safety Section to Hold Annual Meeting May 23 and 24

The Safety Section of the Association of American Railroads will hold its 19th annual meeting at the Hotel Gibson, Cincinnati, Ohio, May 23 and 24. The first session will open May 23 at 9:15 a. m. Sessions will be held in the morning and afternoon of both days. The principal speakers will be E. G. Evans, chairman of the section and superintendent of safety, Louisville & Nashville, and J. W. King, vice-president, operations and maintenance department, A. A. R.

Enthusiasts' Trip

The Lehigh Valley, the Lehigh & New England and the Reading will participate in a 300-mile railroad fan trip from New York to Tamaqua, Pa., and return on May 21. The special train will leave the Washington street terminal of the Lehigh Valley, Jersey City, N. J., and pass over the freight line, the main line and Northern branch via Easton, Pa., to Stockertown; thence over the Nazareth branch of the Lehigh & New England to Pen Argyl where a two hour inspection of motive power will be made. The party will then continue over the main line of the Lehigh & New England to Tamaqua and return via the Quakake branch of the Reading and the Lehigh Valley main line.

Rutland Fan Trip

The New York Central and the Rutland will operate a special railroad "hobby" trip from New York to Rutland, Vt., and return on June 18. Going, the route will be via the Hudson division of the New York Central, the Boston & Maine from Troy, N. Y., and the Rutland beyond White Creek, N. Y. Returning the special train will operate over the Rutland to Chatham, N. Y., and thence over the Harlem division of the New York Central to New York. The round trip fare has been set at \$4.50.

Railroad Industry Committee Under Wage and Hour Law

Administrator Elmer F. Andrews of the Department of Labor's Wage and Hour Division said at his May 4 press conference in Washington, D. C., that he expected the railroad industry committee to be the next one set up under the provisions of the Fair Labor Standards Act. Railroads are subject to the minimum-wage provisions of the act, but exempt from the maximum-hours provisions.

Mr. Andrews revealed that work was well advanced in connection with the establishment of the railroad committee; al-

though he had previously said that present funds are inadequate to finance operations of additional industry committees which will perhaps be unable to function until further appropriations are obtained.

Fire Protection Association Approves Union with A. A. R.

At a special meeting of the Railway Fire Protection Association at Chicago, on May 8, members approved a plan whereby the Railway Fire Protection Association becomes the Fire Protection and Insurance section of the Association of American Railroads. They also approved the early liquidation of the Railway Fire Protection Association. Approval of the plan by the members followed a meeting of the Executive Committee of the Railway Fire Protection Association. Action by both groups officially terminated the existence of the Railway Fire Protection Association. Immediately thereafter, a committee on direction of the Fire Protection and Insurance Section was called to begin the work of the new section, and this was followed by a sectional meeting of the Section at which problems of fire protection and insurance of the railroads were discussed. Such hazards as smoking, high tension power lines and gases stored under high pressure, including oxygen and acetylene were given consideration.

L. M. S. Takes 800 School Boys on Inspection Excursion

The London, Midland & Scottish (Great Britain) carried 800 school boys on a sight-seeing trip from London to its shops at Crewe on April 17 in co-operation with the Crusaders' Union. The party of boys drawn from public and private secondary schools was carried in two sections scheduled over the 158 miles from Euston station, London, to Crewe in 155 minutes. On the return trip each special train was so operated that the boy passengers might see the northbound Coronation Scot running at full speed.

The inspection tour at Crewe covered virtually every building in the plant and occupied about 3½ hr. Meals were served during the trip from seven "kitchen" cars directly to the boys in their regular compartment seats.

George Ball Regains Controlling Stock of Alleghany

George A. Ball, fruit jar manufacturer of Muncie, Ind., who purchased the controlling blocks of stock of Alleghany Corporation from the Van Sweringens in 1935, and thus came into virtual control of the Chesapeake & Ohio and other Van Sweringen properties, is once again in control of the Van Sweringens' top holding company by reason of a default on a \$2,375,000 note by Robert T. Young, Allan P. Kirby and associates. The latter had purchased control of Alleghany in 1937 from the George and Francis Ball Foundation, a charitable organization set up by Mr. Ball, for \$4,000,000 cash and the note. As collateral for the latter, Mr. Young surrendered 1,200,000 out of a total of 1,933,810 purchased shares of Alleghany to the foundation. Ownership of this controlling block of

shares was returned to Mr. Ball by default of the note due May 6.

Freight Car Loading

Revenue freight car loading for the week ended May 6 totaled 572,857 cars, the Association of American Railroads announced on May 11. This was a decrease of 13,158 cars, or 2.2 per cent, below the preceding week, an increase of 36,708 cars, or 6.8 per cent, above the corresponding week last year but a decrease of 190,638 cars, or 25 per cent, below the comparable 1937 week.

As reported in last week's issue, the loadings for the previous week ended April 29 totaled 586,015 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loadings

For Week Ended Saturday, April 29

Districts	1939	1938	1937
Eastern	137,314	115,944	177,809
Allegheny	106,563	100,025	164,405
Poconantas	14,325	33,591	49,809
Southern	94,377	89,792	104,163
Northwestern	80,505	69,510	123,552
Central Western	104,659	89,330	104,907
Southwestern	48,272	44,897	53,182
Total Western Districts	233,436	203,737	281,641
Total All Roads	586,015	543,089	777,827
Commodities			
Grain and Grain Products	35,231	35,338	27,459
Live Stock	14,106	12,630	14,822
Coal	75,601	76,471	124,720
Coke	5,397	3,618	10,314
Forest Products	29,231	26,568	36,877
Ore	15,890	10,928	70,200
Merchandise l.c.l.	153,424	149,957	171,505
Miscellaneous	257,135	227,579	321,930
April 29	586,015	543,089	777,827
April 22	558,706	523,748	756,248
April 15	547,816	537,585	746,523
April 8	535,470	522,049	711,079
April 1	604,241	523,489	721,229
Cumulative Total, 17 Weeks	9,822,512	9,285,152	12,176,978

In Canada.—Carloadings for week ended April 29 totaled 46,740, as compared with 44,066 in the previous week and 44,509 in the same week last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
April 29, 1939	46,740	23,168
April 22, 1939	44,066	21,888
April 15, 1939	41,726	21,169
April 30, 1938	44,509	20,523
Cumulative Totals for Canada:		
April 29, 1939	701,048	385,291
April 30, 1938	753,593	370,112
May 1, 1937	801,447	483,802

Wants I. C. C. Probe of L. C. L. Charges

The Central States Motor Freight Bureau, which describes itself as a voluntary organization composed of more than 600 truckers, has asked the Interstate Commerce Commission to institute upon its own motion an ex parte investigation of all local and joint less-truck-load, less-car-load and less-than-volume minimum charges, rules, regulations and practices applicable to the transportation of freight locally and jointly by truck, rail and water carriers within Central territory. The petitioner contends that present published minimum-charge rules and provisions "do not return sufficient revenues to cover the cost of services rendered."

The C. S. M. F. B., the petition says in another place, "finds no fault" with efforts

of rail or water carriers to meet motor carrier competition by establishing pick-up and delivery; but it asserts that "tremendous damage has been done, to all three types of transportation by the ill-advised, non-compensatory schedules which were placed in effect by the rail and water carriers to establish what they thought was necessary in order to gain equality."

U. S. Chamber's Transportation Resolution

The "Transportation" resolution adopted last week at the twenty-seventh annual meeting of the Chamber of Commerce of the United States in Washington, D. C., was the one endorsing the work of the Chamber-sponsored Transportation Conference, which, as noted in the *Railway Age* of May 6, page 789, had been prepared by the Chamber's Transportation and Communication Department Committee and approved by those attending the round-table discussions of "Urgent Transportation Needs." The resolution reads as follows:

This annual meeting has before it the recommendations of the Transportation Conference of 1938-39 for railroad legislation, arrived at after extended study by representatives of all principal business interests. The objectives include preservation of private ownership and operation; strengthening of carrier credit; avoidance of political rate-making, removal of obstacles to voluntary railroad consolidations and abandonments; authorization of compositions between railroads and their stockholders and creditors; concessions in federal tax provisions to promote improvements, consolidations, operating economies and financial adjustments; and relief from certain unfair burdens and restrictions.

We approve the proposed measures as a limited program appropriate for immediate enactment. Additional measures of remedial railroad legislation, and the necessary factual information on which to base them, should be the subject of thorough investigation with full opportunity for all interests to be heard.

Yale Scientific Magazine Issues Special Railway Number

The spring issue of the Yale Scientific Magazine is devoted entirely to the railroad industry. The 32-page quarterly published by undergraduates of Yale University, New Haven, Conn., contains the following articles by railroad men, all of whom were students at the university: "Modern Railway Operating Methods," by J. A. Appleton, general manager, New York zone, Pennsylvania; "Problems of Railway Signaling," by A. H. Rudd, former chief signal engineer, Pennsylvania; "New Power for Modern Service," by C. E. Brinley, president, Baldwin Locomotive Works; (this article was reviewed in the *Railway Age* of April 29); "Maintaining Motive Power," by H. P. Hass, engineer of tests, New York, New Haven & Hartford; "Stopping the Streamliners," by A. H. Elliot of the American Brake Shoe & Foundry Co.; and "Present Trends in Freight Transportation," by A. N. Williams, president and general manager, Chicago & Western Indiana and the Belt Railway of Chicago. The issue also contains a brief article entitled "The Case for the Railroads," by J. J. Pelley, president of the Association of American Railroads; an exposition of current railroad problems from the shipper's point of view by W. L. Campbell, general manager, Kroger Grocery & Baking Co., and a discussion of college men in railroad service by Kent T. Healy, assistant professor of economics,

Yale University. The whole issue is well illustrated with photographs and applicable graphs and diagrams.

Transcontinental Roads Ask Exemption from Auto Rate Probe

The transcontinental railroads and those serving the Pacific slope states have petitioned the Interstate Commerce Commission to be eliminated from the investigation of rail, motor and water rates on new automobiles now being conducted by the commission in conjunction with the United States Maritime Commission, as noted in the *Railway Age* of April 15, page 673.

The petitioning carriers said that there was nothing in common in the railroad or highway rates on new automobiles moving either transcontinentally or within the Pacific slope states and the rates in Official territory out of which the investigation originated. The compilation of statistics required by a questionnaire issued by the commission and the attendance at forthcoming hearings would involve a heavy expense upon these railroads which seems not justified, it was stated.

It was also asserted that the investigation apparently grew out of attempts of railroads to meet motor truck competition on new autos between points in the East and North and from and to other points east of the Rocky Mountains; and that the investigation would be greatly simplified if the transcontinental and Pacific Coast traffic were eliminated and the proceeding confined to the territory east of the Rockies.

No "Expert" Merger Probe in Canada

The probe of the railway problem and the Beatty unification plan, which has been before a special Senate committee at Ottawa for two sessions, took a new turn last week when Senator Arthur Meighen, Conservative leader, moved for further study of the savings estimates by both roads under unification and cooperative economies to be undertaken by a committee of impartial railway engineers and accountants, presumably from the United States.

Such an impartial study of the voluminous statistical evidence given to the committee last session and this session was urged by Senator Meighen and other Conservative members on the ground that laymen, such as Senators, were in no position to decide whether the C. P. R. estimate of \$75,000,000 savings, based on the 1930 showing, or \$45,000,000 on the 1937 showing, was practicable or whether even the Canadian National estimate of \$10,000,000 was nearer the mark. Only railway experts with no connection with the Canadian roads could decide this.

Senator Meighen's plan was vigorously opposed by Senator Raoul Dandurand, government leader in the Senate, who said there had already been two or three expensive probes of the railway problem. One was that of the Duff Commission, but the country was no nearer a solution than before the probes were made. Finally the Meighen motion was voted down by 5 for and 7 against, one Conservative, Senator A. D. McRae of Vancouver, voting with the Liberals, thus preventing a tie vote. Moreover, Senator McRae

promised to unfold to the special committee this week his plan to solve the problem.

At the same sitting of the committee last week by straight party votes the Canadian Pacific was debarred from making a statement in criticism of the Canadian National's announced decision to complete the Montreal terminal, and the C. P. R. was debarred from replying to the reply of the Canadian National on the C. P. R. estimate of savings from unification.

Beatty Discusses Unification and Co-operation at Annual Meeting

The practical difficulties of so-called "co-operation" between the two Canadian railroads and the need for real unification were emphasized by Sir Edward Beatty, chairman and president of the Canadian Pacific, during the annual stockholders' meeting held in Montreal, Que., on May 4. Reminding his audience that seven years ago, when a Royal commission recommended and Parliament enjoined co-operation between the two systems, he had "ventured to suggest that it would prove impossible to reconcile co-operation and competition so as to permit of savings commensurate with the needs of the situation," the Canadian Pacific head pointed out that total annual savings at the end of 1938 from such co-operative measures, including both those already in effect and those authorized by the Joint Executive Committee, totaled only \$1,989,000.

He stated further that the Canadian Pacific "has not at any time omitted any act which would permit economies to be made on a fair basis." Further, he said, even this inadequate program of joint economy has recently suffered a serious set-back, citing the recently-announced intention of the Canadian National to proceed with the building of a new separate terminal in Montreal without further consideration of joint use of the Canadian Pacific facilities already existing. On the whole, he declared, public opinion has turned to the realization that the system of co-operation made statutory in 1933 "cannot accomplish the results which the Commission was led to believe were practicable."

Motor Transport Tax Figures Must Be Qualified

A comparison of taxes or anything else between "motor transport" so-called and the railroads should not include automobiles, farmer-owned trucks, delivery trucks or private trucks of any description, according to the current number of "Talking Points," a news letter issued by H. D. Pollard, receiver of the Central of Georgia. Citing the recent statement of American Trucking Associations that motor transport paid 417 million dollars in taxes in 1937 as compared with 325 million dollars by the railroads in the same year, the news letter insists that the proper basis of comparison is between the railroads and that section of the trucking industry engaged in competition with them; that a comparison of taxes of all trucks or of motor vehicles with railway taxes should not be permitted to confuse the public. In this connection it is pointed out that the

same booklet of A. T. A. which makes the comparisons of tax figures admits that "for hire motor transport" consists of 600,000 trucks which comprise only one-seventh of the total number of trucks in the United States and about 2 per cent of the total number of motor vehicles.

The news letter goes on to point out that even granting that the tax figures given by the trucking industry are correct (which they are not if "motor transport for hire" is considered) there is no comparison between what motor transport gets for its tax payments and what the railroad industry gets in return for its payments. The annual maintenance expense of the 240,000 miles of railroad is approximately 432 million dollars. Add this to the railroad tax bill of \$325,000,000, and the railroad bill for taxes and maintenance totals 757 million dollars as compared with 417 million dollars for motor transport taxes. Furthermore it should be noted that in this calculation no account is taken of some 175,000 miles of yard tracks and sidings, which also require large sums for maintenance.

Bills in Congress

Senator McCarran, Democrat of Nevada, and Representative Martin, Democrat of Colorado, have introduced identical bills (S. 2333 and H. R. 6223) "to provide for adequate lighting facilities of cabooses used in connection with train movement on railroads of the United States." The bills would make it unlawful one year after the enactment date to use any caboose unless it is equipped with an electric light "of not less than 20 foot-candlepower on the working area of the caboose desk."

Senator Sheppard, Democrat of Texas, has introduced S. 2294 "to provide for the protection and conservation of equities or rights accruing to the government because of railroad land grants." It would authorize the Secretary of the Interior, through the General Land Office, to obtain for Congress such information as the latter may require to protect the government "from breaches of any of the terms, conditions or covenants contained in any act by which such grant was made or any act amendatory or supplemental thereto . . ."

Another super-highway bill—H. R. 6228—has been put in the House by Representative Keller, Democrat of Illinois. It would authorize the creation under the direction of the Secretary of Agriculture of a "nation-wide system of hard-surfaced post roads and their appurtenances," the latter to include airplane fields. While the bill lays out the routes, the Secretary of Agriculture would be authorized to modify them provided he did not cut the total mileage below "approximately" 55,000 miles or push it above "approximately" 75,000 miles. Generally the system would "connect with each other the national capital and the state capitals and the principal cities of the United States." To help pay the bill the Secretary of the Treasury, with the approval of the President, would be authorized to collect specified taxes on all motor vehicles in the country and on gasoline.

The Senate last week passed S. 1307 which would authorize the Secretary of

War to grant a revocable license to the Union Pacific to maintain certain trackage on the Fort Leavenworth Military Reservation. The House committee on the territories has reported favorably the bill (H. R. 4868) to amend the Alaska railroad act to permit the President to provide facilities for tourists in Mount McKinley National Park.

More Reshuffling of Government Agencies

Transfer of the Inland Waterways Corporation from the War Department to the Department of Commerce, abolition of the National Bituminous Coal Commission and of the office of Director General of Railroads are proposed by President Roosevelt in a second major reorganization plan submitted to Congress on May 9 pursuant to the recently-enacted Reorganization Act of 1939. Functions of the seven-man coal commission along with those of the office of consumers' counsel would be transferred to the Secretary of the Interior, while the Secretary of the Treasury, who has been Director General of Railroads for several years, would retain the functions of that office while dropping the title.

As pointed out in the *Railway Age* of April 29, page 751, where the President's first reorganization proposal, affecting the Reconstruction Finance Corporation and the Bureau of Public Roads, was reviewed, these executive orders become effective unless disapproved by Congress within 60 days of submission. Already the House has defeated a resolution to disapprove the first plan, while the May 9 proposal brought forth a movement in the Senate to bring about approval of both plans within 30 days.

The reference in the President's message to the proposed transfer of Federal Barge Line to the Department of Commerce notes that "this corporation, which operates inland waterways transportation facilities, should be coordinated with the administration of other aids to commerce and industry." In proposing the transfer of National Bituminous Coal Commission functions to the Secretary of the Interior, the President observes that "thus the task of conserving the bituminous coal resources of the country may be carried on directly by the head of the department principally responsible for the conservation of fuel and other mineral supplies . . . direct administration will be cheaper, better and more effective than through the cumbersome medium of an unnecessary commission."

Citizenship Day at Mechanicville

By proclamation of Mayor Anson B. Collins, Thursday, May 4, was designated as Citizenship Day in Mechanicville, N. Y. This movement was inspired by the Railroad Y. M. C. A. at that place, the details being worked out and promoted under the direction of the board of directors of the association by its general secretary, E. Russell Babcock. The general committee in charge of the activities was made up largely of representatives from the Railroad Y. M. C. A. board of directors, the various service clubs and fraternal organizations and the American Legion. Sermons on citizenship were delivered by most

of the pastors in the community on the preceding Sunday.

The program on Thursday included a luncheon meeting of the board of directors of the Railroad Y. M. C. A., at which measures for following up this initial effort were discussed. During the afternoon a general assembly was held at the high school, music being furnished by the high school orchestra and Frank M. Warner, of the Grand Central Railroad Branch of the Y. M. C. A. of New York City, the address being made by Roy V. Wright, managing editor of the *Railway Age*.

At five o'clock the American Legion presented a flag to the Railroad Y. M. C. A., the flag raising ceremony being conducted by the American Legion and President D. C. Gage of the board of management of the Y. M. C. A., with participation by the American Legion Drum and Bugle Corps. A supper meeting of the Hi-Y Club at six o'clock, was featured with music by Mr. Warner and a talk by Mr. Wright.

The program culminated with a mass meeting at the high school at eight o'clock in the evening. A flag salute was conducted under the direction of the Boy Scouts and the address of welcome was made by E. Russell Babcock. Community singing was led by Mr. Warner. An address on Responsible Citizenship was made by Mr. Wright, who was introduced by Mayor Collins.

Would Allow Part of Boost Sought in Fertilizer Rates

The Interstate Commerce Commission has found not justified suspended schedules whereby the railroads proposed to add another 10 per cent increase to January 20, 1938's 4.5 per cent increase in interterritorial carload rates on fertilizer and fertilizer materials between points in Official and Southern territories. This finding in I. & S. Docket No. 4486, with its report by former Commissioner McManamy, is without prejudice to the filing of new schedules publishing rates not in excess of 10 per cent over those in effect January 19, 1938.

The report also embraces Fourth Section Applications Nos. 17155 and 17207 in which connection another finding grants conditional fourth-section relief for the establishment of interterritorial carload rates on fertilizers and fertilizer materials between points in Official and Southern territories; also on the same commodities, i.e., from St. Louis, Mo., and East St. Louis, Ill., to points in Southern territory.

The suspended tariffs, which were originally published to become effective May 1, 1938, comprised part of the railroads' plan to establish two instead of four sets of rates on the commodities involved, i.e., instead of having four different sets of rates—one for application in Southern territory, one in Central territory, one in Eastern territory, and the other interterritorially between Official and Southern territories—it was the position of the carriers that there should be but two sets of rates—one for application throughout Official territory, and the other for application within Southern territory and interterritorially between Southern and Official ter-

ritories. They proposed to accomplish this readjustment by increasing the present interterritorial rates to the basis now in effect in Southern territory and by increasing the present rates in Central territory to the basis now in effect in Eastern territory. Only the proposed interterritorial boost was dealt with in the present proceeding, the tariffs carrying the proposed increases in Central territory rates being under suspension in I. & S. Docket No. 4522.

As noted at the outset the rates involved were increased an average of approximately 4.5 per cent on January 20, 1938, as a result of the commission's decision in the Ex Parte 115 case. The report points out that a 10 per cent increase on top of that would bring increases ranging from 68 cents to \$1.11 per ton over the rates in effect January 19, 1938, whereas application of a 10 per cent increase to these January 19, 1938, rates would result in advances ranging from 46 to 71 cents a ton. Protestants, the report had previously noted, "do not object" to an increase of the latter proportions; and they reminded the commission that in its Ex Parte 123 decision in March, 1938, it "emphasized that in authorizing further increases it was giving consideration to the increases authorized or resulting from" the Ex Parte 115 decision of 1937.

Meanwhile the railroad defense of the suspended schedules had recalled commission admonishments that the carriers should study the rate structure and increase rates "which industry and traffic could bear without harm," in which connection respondents took the position that the proposed rates "come well within that category." But this seems to have left the commission unimpressed, since, as noted at the outset, the effect of its decision is to permit the filing of new schedules carrying only those increases to which protestants "do not object."

Commissioners Mahaffie and Lee each filed a brief dissenting opinion, the former because he thought the record "fully justifies the level of rates proposed by the carriers;" and the latter because he still believes as he did when he wrote his separate expression in Ex Parte 123—that "the agricultural industry should not be further burdened," through increases in freight rates "which will without doubt be passed on to the farmers."

Atlantic Coast Line Accused in Wage and Hour Law Complaint

An application for an injunction to restrain the Atlantic Coast Line from alleged violation of the minimum-wage and record-keeping provisions of the Fair Labor Standards Act was filed May 4 on behalf of Administrator Elmer F. Andrews of the Wage and Hour Division of the U. S. Department of Labor in the United States District Court at Richmond, Va. The railroads are subject to the minimum wage provisions of the Fair Labor Standards Act, but are exempt from its maximum-hours provisions.

Announcement that the suit had been filed was made by Administrator Andrews at a press conference in Washington, D. C., on the same day. He said that 4,400 A.

C. L. maintenance employees are involved, and gave a "rough estimate" that these might be in a position to recover up to \$300,000 if they got the double damages provided in the law. They would, however, have to bring separate actions for such damages, since the Administrator's pleading is only for an injunction to halt the alleged violations.

The complaint alleges that the railroad has arbitrarily deducted from the wages of maintenance employees varying sums, ostensibly to cover rent on company-owned houses many of which, it is alleged, are non-existent and many others are not occupied by the employees from whose pay envelopes the "rental" is deducted.

According to the complaint maintenance employees of the railroad company have failed to draw the minimum wage, 25 cents an hour, prescribed in the Wage and Hour Law because of this practice of the company, which it is alleged was instituted after the effective date of the Act.

"On or about October 24, 1938, the date when the said Act became effective," the complaint alleges, "the defendant instituted and to the date hereof has continued the practice of arbitrarily assigning to each of the said maintenance of way and structures employees, company houses, portions thereof, or other quarters in which to live, a substantial number of which houses, portions thereof, or other quarters were and are non-existent."

"Such company houses and other living quarters have been assigned to the said employees without regard to whether they desired or desire to live therein, regardless of their existing arrangements and commitments on living quarters, and without regard to whether, because of the physical condition or location of the said company houses, they were suitable for the said employees to live in. In many cases, quarters so assigned were not and are not lived in by the said employees, inasmuch as they already had and have houses or other quarters in which to live, or because such company houses or other quarters are far removed from and inconvenient to their places of employment, or where such houses, etc., so purportedly assigned to such employees were and are non-existent."

"Prior to the said effective date of the Act, no company houses, portions of houses or other quarters were furnished or assigned or made available to many of the said maintenance of way and structures employees, and in no case were any such employees except foremen charged for the use of company houses, portions of houses or other quarters occupied by them. Since the said date, however, defendant has purported to charge such employees for such company houses, portions of houses or other quarters, amounts which bear no relation to and are in excess of the reasonable cost of such facilities. Since the said date, the cash wages paid such employees have remained the same and the amounts purportedly charged for such company houses, etc., have been arbitrarily computed by the defendant so as to equal the difference between the cash wages paid such employees for the number of hours worked in any pay period, and the wages which such employees would have been

paid had they been compensated at the minimum hourly rate (25 cents an hour) provided for in Section 6 of the Act."

The complaint also alleges that in addition to these deductions for quarters, a substantial number of employees also are subjected to deductions made from their wages for purchase of food from Company stores at prices which include a profit to the company. This, it is said, is contrary to regulations prescribed by the Administrator defining the reasonable cost of board, lodging and other facilities.

The complaint asks that the railroad company be permanently enjoined from violation of Section 6 of the Act, relating to minimum wages; Section 11(c), under which employers are required to preserve records of wages, hours and other conditions and practices of employment; and those provisions of Section 15 which prohibits the filing or keeping of any statement, report or record known to be false in any material respect.

Northland Greyhound Gets I. C. C. Approval of Acquisitions

Following the readjustment of its board of directors so that members having "connections" with the Great Northern are a minority, the Northland Greyhound Lines has won Interstate Commerce Commission approval of several applications for authority to acquire other bus lines without the necessity for making the special showing required by the Motor Carrier Act's section 213 that the proposed acquisition will enable the affiliated railroad to use motor service "to public advantage in its operations, and will not unduly restrain competition." The lines to be acquired are: Sioux Limited Lines; Hiawatha Trails, Inc.; Northwestern Motor Bus Company; and Gray Transportation Company, Inc.

The report of the commission was upon further consideration of the applications which were previously passed upon by Division 5, whose decision on the latter three cases was reviewed in the *Railway Age* of August 20, 1938, page 291. Since the hearing in the title case (Menzo M. Liederbach doing business as Sioux Limited Lines) the present report notes that the Northland board of directors has been altered so that Great Northern representatives, formerly a majority of a seven-man board, are now a minority of a nine-man board. Meanwhile the Greyhound Corporation, none of whose stock is owned by the G. N., has recently been authorized by the commission "to acquire control of Northland through purchases of additional stock." The G. N.'s present stock interest in Northland, the report goes on "is less than 45 per cent, representing an investment of approximately \$800,000. . ."

The latter, the commission says, raises the question as to why the railroad should wish to invest such an amount in Northland, "unless it expects thereby to promote its own interests in some way other than by obtaining a profitable return on the investment." It resolves the question by citing the Motor Carrier Act's declaration of policy "to improve the relations between, and coordinate transportation by the regulation of, motor carriers and other carriers," and to discourage "unfair or de-

structive competitive practices" by motor carriers; adding that "an investment in a competing motor carrier and minority representation on its board of directors would tend to 'improve the relations between' the motor carrier and the railroad and to avoid 'unfair or destructive competitive practices', without necessarily bringing the situation within the scope" of the Motor Carrier Act's above-mentioned section 213.

Chairman Caskie's dissent was noted, while Commissioner Lee dissented in part, being unable to concur in the approval of the acquisition by Northland of Sioux Limited Lines. Commissioner McManamy concurred in Mr. Lee's expression.

Federal Barge Help on Strike

(Continued from page 842)

non-union workers. A letter of rejection sent by the negotiating committee to the management declared the counter proposal was drawn "with the clear intent of laying the basis for the formation of company unions."

H. R. Odell, general operating manager of the barge line, declared that the barge line was unable to meet the union wage demands, which, he said, would add \$600,000 to the annual payroll for unlicensed personnel. Upon the complaint of the General Council of River Workers, the Department of Justice began an investigation of the charges that the Federal Barge Line used strikebreakers and violated the Wagner Labor Relations Act.

Several barges loaded with merchandise have proved to be important factors in the controversy since these delayed shipments will prove costly to the barge lines if not delivered. As a result, the barge lines have endeavored to unload or divert this merchandise and strike sympathizers have attempted to prevent such action. According to reports, some persons threatened to drop dynamite from the Illinois-Kentucky highway bridge onto a tow if the captain attempted to move a tow to Memphis instead of tying it up at Cairo. Later, according to reports, he was beaten when he attempted to board a train. At New Orleans, five officers, pilots and engineers were besieged all day aboard the towboat Natchez, and were slugged when they finally came ashore. At the height of the fighting, several shots were reported to have been fired from the shore.

On May 5, according to the company, five loaded barges were cut loose from a mooring at Memphis, and drifted five miles downstream before running aground. On the same day, the river steamer Natchez held at New Orleans departed under guard with a non-union crew.

Negotiations to end the strike began on May 8.

April Employment Statistics

Railroad employment increased 0.24 per cent—from 947,862 to 950,130—during the one-month period from mid-March to mid-April, but the index was down one point from March's 54.6 to 53.6 in April, according to the Interstate Commerce

Commission's compilation based on preliminary reports. April employment, however, was 4.03 per cent above that of the comparable 1938 month when the index (based on the 1923-1925 average as 100 and adjusted for seasonal variation) was 51.5.

The biggest April increase over March was in the maintenance of way and structures group, up 6.51 per cent; while drops of 2.19 per cent and two per cent, respectively, were reported for the maintenance of equipment and stores and train and engine service groups. The maintenance of way and structures employees increased 9.28 per cent over April, 1938, while the maintenance of equipment and stores group showed an 8.87 per cent increase. Meanwhile, as compared with last year, the group embracing executives, officials and staff assistants was off 2.76 per cent; professional, clerical and general forces were down 1.19 per cent; and there were 1.65 per cent fewer yardmasters, switchtenders and hostlers at work.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

- AIR BRAKE ASSOCIATION.—R. P. Ives, Westinghouse Air Brake Co., 350 Fifth Ave., New York, N. Y.
- ALLIED RAILWAY SUPPLY ASSOCIATION.—J. F. Gettrust, P. O. Box 5522, Chicago, Ill.
- AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—W. R. Curtis, F. T. R., M. & O. R. R., 327 S. La Salle St., Chicago, Ill.
- AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. P. Soebbing, 1431-B Railway Exchange Bldg., St. Louis, Mo.
- AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St., New York, N. Y.
- AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—F. O. Whiteman, Union Station, St. Louis, Mo. Annual meeting, June 6-8, 1939, Hotel Stevens, Chicago, Ill.
- AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, Poole Bros., Inc., 85 W. Harrison St., Chicago, Ill.
- AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—F. R. Borger, C. I. & L. Ry., 836 S. Federal St., Chicago, Ill.
- AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, 319 N. Waller Ave., Chicago, Ill. Annual meeting, October 17-19, 1939, Hotel Stevens, Chicago, Ill.
- AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York, N. Y.
- AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—J. M. Hurley, N. Y. O. & W. Ry., Middletown, N. Y.
- AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in co-operation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill. Annual Meeting, March 12-14, 1940, Chicago, Ill.
- AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—M. W. Jones, Baltimore & Ohio R. R., 1105 B. & O. R. R. Bldg., Baltimore, Md. Next meeting, June 10, 1939, La Salle Hotel, Chicago, Ill.
- AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C. M., St. P. & P. R. R., 11402 Calumet Ave., Chicago, Ill.
- AMERICAN SHORT LINE RAILROAD ASSOCIATION.—R. E. Schindler, Tower Bldg., Washington, D. C.
- AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York, N. Y. Semi-annual meeting, July 10-15, 1939, Fairmont Hotel, San Francisco, Cal. Fall meeting, September 4-8, 1939, Hotel Pennsylvania, New York, N. Y. Annual meeting, December 4-8, 1939, Hotel Bellevue-Stratford, Philadelphia, Pa.
- Railroad Division.—Marion B. Richardson, 21 Hazel Ave., Livingston, N. J.
- AMERICAN TRANSIT ASSOCIATION.—Guy C. Hecker, 292 Madison Ave., New York, N. Y. Annual Meeting, August 9-16, 1939, Biltmore Hotel, Los Angeles, Cal., and Fairmont Hotel and Mark Hopkins Hotel, San Francisco, Cal.
- AMERICAN WOOD PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St., N. W., Washing-

ton, D. C. Annual meeting, 1940, St. Louis, Mo.

ASSOCIATION OF AMERICAN RAILROADS.—H. J. Forster, Transportation Bldg., Washington, D. C.

Operations and Maintenance Department.—James W. King, Vice-President, Transportation Bldg., Washington, D. C.

Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.

Transportation Section.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.

Fire Protection and Insurance Section.—W. F. Steffens, New York Central, Room 3317, 230 Park Avenue, New York, N. Y.

Freight Station Section.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.

Operating Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York, N. Y. Annual Meeting, June 15-16, 1939, Hotel Stevens, Chicago, Ill.

Protective Section.—J. C. Caviston, 30 Vesey St., New York, N. Y. Annual meeting, June 22-23, 1939, Netherland-Plaza Hotel, Cincinnati, Ohio.

Safety Section.—J. C. Caviston, 30 Vesey St., New York, N. Y. Annual meeting, May 23-25, 1939, Hotel Gibson, Cincinnati, Ohio.

Telegraph and Telephone Section.—W. A. Fairbanks, 30 Vesey St., New York, N. Y.

Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill. Annual Meeting, March 12-14, 1940, Chicago, Ill.

Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill.

Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill.

Signal Section.—R. H. C. Balliet, 30 Vesey St., New York, N. Y.

Mechanical Division.—V. R. Hawthorne, 59 E. Van Buren St., Chicago, Ill. Annual meeting, June 28-30, 1939, Commodore Hotel, New York, N. Y.

Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago, Ill.

Purchases and Stores Division.—W. J. Farrell, 30 Vesey St., New York, N. Y. Annual Meeting, June 14-15, 1939, Palmer House, Chicago, Ill.

Freight Claim Division.—Lewis Pilcher, 59 E. Van Buren St., Chicago, Ill. Annual Meeting, May 23-25, 1939, Jefferson Hotel, St. Louis, Mo.

Motor Transport Division.—George M. Campbell, Transportation Bldg., Washington, D. C.

Car-Service Division.—E. W. Coughlin, Transportation Bldg., Washington, D. C.

Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington, D. C.

Accounting Division.—E. R. Ford, Transportation Bldg., Washington, D. C. Annual Meeting, June 27-29, 1939, Royal York Hotel, Toronto, Ontario, Canada.

Treasury Division.—E. R. Ford, Transportation Bldg., Washington, D. C.

Traffic Department.—A. F. Cleveland, Vice-President, Transportation Bldg., Washington, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Claim Agent, Alton R. R., 340 W. Harrison St., Chicago, Ill. Annual meeting, May 17-19, 1939, Hotel Peabody, Memphis, Tenn.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—W. S. Carlisle, National Lead Company, 900 W. 18th St., Chicago, Ill. Meets with American Railway Bridge and Building Association.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4468 Oxford Ave., N. D. G., Montreal, Que. Regular meetings, second Monday of each month, except June, July and August, Windsor Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS, Mo.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel Mayfair, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—Frank Kartheiser, Chief Clerk, Mechanical Dept., C. B. & Q., Chicago, Ill. Annual Meeting, third week in October, 1939, Hotel Sherman, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—G. K. Oliver, 2514 W. 55th St., Chicago, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—Mrs. M. D. Reed, 1817 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings,

second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—J. T. Bougher, 424 W. 33rd St. (11th floor), New York, N. Y. Next meeting, September 28, 1939, New York, N. Y.

INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—F. T. James, General Foreman, Delaware, Lackawanna & Western, Kingsland, N. J. Annual meeting, third week in October, 1939, Hotel Sherman, Chicago, Ill.

INTERNATIONAL RAILWAY MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y. Annual meeting, third week in October, 1939, Hotel Sherman, Chicago, Ill.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Clyde S. Bailey, New Post Office Bldg., Washington, D. C. Annual meeting, August 22-25, 1939, Seattle, Wash.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. H. White, Room 1826, 208 S. La Salle St., Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Touraine, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York, N. Y. Regular meetings, third Friday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box 3275, San Francisco, Cal. Regular meetings, second Thursday of each month, alternately at San Francisco and Oakland, except June at Los Angeles and October at Sacramento.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 1941 Oliver Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—J. Mc C. Price, Allen-Bradley Company, 600 W. Jackson Blvd., Chicago, Ill. Next meeting, October 24-26, 1939, Hotel Sherman, Chicago, Ill.

RAILWAY FIRE PROTECTION ASSOCIATION.—P. A. Bissell, 40 Broad St., Boston, Mass.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, 1255 Old Colony Bldg., Chicago, Ill. Annual meeting, third week in October, 1939, Hotel Sherman, Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1941 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division and Purchases and Stores Division, Association of American Railroads.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with Telegraph and Telephone Section of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 903 Syndicate Trust Bldg., St. Louis, Mo. Annual meeting, May 23-24, Netherland-Plaza Hotel, Cincinnati, O.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—C. A. Lichty, 319 N. Waller Ave., Chicago, Ill. Annual meeting September 19-21, 1939, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with A. A. R., Signal Service.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—D. W. Brantley, C. of Ga. Ry., Savannah, Ga. Semi-annual meeting, July 27, 1939, Panama City, Fla.

TORONTO RAILWAY CLUB.—D. M. George, P. O. Box 8, Terminal "A," Toronto, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, O. & C. Company, 59 E. Van Buren St., Chicago, Ill. Meets with Roadmasters' and Maintenance of Way Association.

UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 112 Hatfield Place, Port Richmond, Staten Island, N. Y. Trip to New York World's Fair, June 17-18, 1939. Headquarters at Hotel Lincoln, New York. Annual meeting, October 14-15, 1939, Hotel Roanoke, Roanoke, Va.

WESTERN RAILWAY CLUB.—W. L. Fox (Executive Secretary), Room 822, 310 South Michigan Ave., Chicago, Ill. Regular meetings, third Monday of each month, except June, July, August and September, Hotel Sherman, Chicago, Ill.

Supply Trade

T. E. Barlow has been appointed metallurgical engineer of the **Copper Iron & Steel Development Association** with headquarters at Cleveland, Ohio.

Howard G. Hill has resigned as mechanical engineer of the **Miller Felpax Company**, Winona, Minn., to engage in other business.

The International Nickel Company has opened a new field office at 67 Wall street, New York, under the direction of **J. W. Sands**, whose duties will be to promote the use of nickel alloy steels and stimulate interest in the company's products.

Melvin Pattison, president and treasurer of the **Industrial Brownhoist Corporation**, Bay City, Mich., has been



Melvin Pattison

elected chairman of the board, and has been succeeded by **Hoyt E. Hayes**, vice-president. **James B. Hayden**, assistant sales manager, has been promoted to sales manager. Mr. Pattison was born in Hudson, Mich., on May 24, 1864, and entered the employ of Cox Brothers, Chicago, as a yard clerk in 1885. He was promoted at



Hoyt E. Hayes

various times until he became general superintendent of yards and docks. He resigned from this company in 1900 to become

associated with the Brown Hoisting Machinery Company and held successively the positions of sales manager, plant manager, executive vice-president and president of the Industrial Brownhoist Corporation which absorbed the Brown Hoisting Machinery Company in 1927.

Mr. Hayes was born in Cleveland, Ohio, on February 27, 1890, and graduated from Yale University in 1911 with a degree of mechanical engineer. Upon graduation he entered the employ of the Brown Hoisting Machinery Company, working in its shops at Cleveland. As a salesman he served the corporation in Montreal and New York and later in Paris and London. Upon his return to the home office he was placed in charge of the Cleveland and Pittsburgh districts and the company's export business, which position he held until 1934 when he was promoted to vice-president in charge of sales. He was made a director in 1938.

Mr. Hayden was born in Cleveland, Ohio, on June 14, 1876, and has been with the corporation for 39 years. Prior to that time he spent two years with the Walker Manufacturing Company of Cleveland as mechanical engineer. Mr. Hayden entered the employ of the corporation in charge of



James B. Hayden

the mechanical engineering department at Cleveland, and served as engineer and salesman for the corporation until 1934 when he was made assistant sales manager.

H. P. Mee, who retired as vice-president in charge of sales, service and advertising of the Caterpillar Tractor Company, Peoria, Ill., in June, 1937, has been elected executive vice-president of the **Cleveland Tractor Company**, Cleveland, Ohio. Mr. Mee was born in San Francisco, Cal., and after varied experience in several industries he became credit manager and assistant secretary of the C. L. Best Tractor Company in 1920. When this company became a part of the Caterpillar Tractor Company in 1925, Mr. Mee became treasurer of the company, then secretary-treasurer, then vice-president and treasurer, then vice-president in charge of sales and finally vice-president in charge of sales, service and advertising, which latter position he held in 1936 and until his retirement in June, 1937.

H. W. Wolff, assistant director of purchases for the **Westinghouse Air**

Brake Company and subsidiaries, including the **Union Switch & Signal Co.**, has been promoted to director of purchases with headquarters, as formerly, at Wil-



H. W. Wolff

merding, Pa. He succeeds **W. A. Forrester**, who has retired after 49 years of continuous service with the Westinghouse Air Brake Company. Mr. Wolff was born near Elizabeth, N. J., and after being graduated from the local high school and business college, entered the employ of the Hall Switch & Signal Co., at Garwood, N. J. In a few years he rose to the position of purchasing agent, and thereafter successively held the positions of works manager, general manager and treasurer, and was a member of the board of directors. After the Hall Company was absorbed by the Union Switch & Signal Co., in 1925, Mr. Wolff served the latter company in a general executive capacity. In 1937 he was appointed assistant director of purchases of the Air Brake Company, which position he has held until his recent promotion.

Equipment and Supplies

FREIGHT CARS

THE GENERAL CHEMICAL COMPANY is inquiring for 5 or 10 hopper cars of 50 or 70 tons' capacity.

THE UNION RAILROAD COMPANY has given a contract to the Greenville Steel Car Company for 10 caboose cars. Inquiry for this equipment was reported in the *Railway Age* of April 15, page 678.

IRON AND STEEL

PITTSBURGH & LAKE ERIE.—The board of directors of this road have authorized the purchase of 5,000 tons of rail.

MOTOR VEHICLES

THE BOSTON & MAINE TRANSPORTATION COMPANY has ordered 5 buses from the American Car & Foundry Motors Co.

Financial

ATLANTA, BIRMINGHAM & COAST.—*Annual Report*.—The 1938 annual report of this road shows net deficit, after interest and other charges, of \$173,798, an increase of \$86,163 over net deficit in 1937. Selected items from the income statement follow:

	1938	Increase or Decrease Compared with 1937
RAILWAY OPERATING REVENUES	\$3,366,942	-\$286,505
Maintenance of way	523,037	-88,901
Maintenance of equipment	604,156	-49,149
Transportation	1,336,327	-97,844
TOTAL OPERATING EXPENSES	3,037,636	-268,114
NET REVENUE FROM OPERATIONS	329,306	-18,391
Railway tax accruals	269,434	+6,582
Railway operating income	59,872	-24,973
Equipment rents—		
Net Dr.	243,133	+54,624
Joint facility rents—		
Net Dr.	9,007	+95
NET RAILWAY OPERATING DEFICIT	192,268	+79,693
Other income	36,008	-6,744
TOTAL INCOME (DEFICIT)	156,260	+86,438
Rent for leased roads	1,181	-56
Interest on funded debt	789	-282
TOTAL FIXED CHARGES	14,120	-413
NET DEFICIT	\$173,798	+\$86,163

ATLANTIC COAST LINE.—*Abandonment*.—The Interstate Commerce Commission, Division 4, has authorized this road to abandon its 2.91-mile line between Tavares, Fla., and Lane Park.

ATLANTIC COAST LINE.—*Annual Report*.—The 1938 annual report of this road shows net deficit, after interest and other charges, of \$1,858,450, as compared with net income of \$2,454,140 in 1937. Selected items from the income account follow:

	1938	Increase or Decrease Compared with 1937
RAILWAY OPERATING REVENUES	\$44,164,025	-\$3,808,154
TOTAL OPERATING EXPENSES	35,491,787	-1,341,013
Operating ratio	80.36	+3.58
NET REVENUE FROM OPERATIONS	8,672,237	-2,467,141
Railway tax accruals	4,625,000	-200,000
Railway operating income	4,047,237	-2,267,141
Equipment rents—		
Net Dr.	1,711,141	+278,560
Joint facility rents—		
Net Cr.	54,654	-2,321
NET RAILWAY OPERATING INCOME	2,390,750	-2,548,023
Other income	3,249,576	-1,597,385
TOTAL INCOME	5,640,326	-4,145,409
Interest and rentals	6,450,536	-6,500
NET DEFICIT	\$1,858,450	+\$4,312,591

ATCHISON, TOPEKA & SANTA FE.—*Abandonment*.—The Interstate Commerce Commission, Division 4, has authorized this road and the New Mexico Central,

Continued on next left-hand page

LIMA POWER AT WORK



One of the modern 4-8-4 type locomotives built by Lima for the Grand Trunk Western

POWER

that meets the needs of tomorrow!

To meet the new requirements of modern passenger service, locomotives must combine high sustained tractive effort, rapid acceleration to road speed and low operating costs.

LIMA LOCOMOTIVE WORKS,



INCORPORATED, LIMA, OHIO

respectively, to abandon operation and to abandon a 19.2-mile segment (from Kennedy, N. M., to Stanley) of the 30.63-mile line between Kennedy and Moriarty, N. M., which the applicants sought to give up. Commissioner Mahaffie dissented, calling attention to the majority position that they should refuse to permit abandonment of the Stanley-Moriarty segment in the hope that traffic may later develop—a hope, he added, which “appears to me to have little to support it.” The dissenting commissioner would have granted the entire application.

BALTIMORE & OHIO.—Notes.—The Interstate Commerce Commission, Division 4, has modified an order of April 18, 1934, so as to permit \$2,955,000 of this road's four per cent registered serial collateral notes, held by the Reconstruction Finance Corporation, to be amended by eliminating therefrom the applicant's right of redemption. The reports states that R. F. C. requested the modification.

CENTRAL OF NEW JERSEY.—Abandonment Application Withdrawn.—The Interstate Commerce Commission, Division 4, has granted this road's request for dismissal without prejudice of an application for authority to abandon a line extending from Bowentown Junction to Greenwich Pier in Cumberland County, N. J.

CHICAGO & EASTERN ILLINOIS.—Annual Report.—The 1938 annual report of this company shows net deficit, after interest and other charges, of \$1,387,649, an increase of \$671,825 as compared with net deficit in 1937. Selected items from the income account follow:

	1938	Increase or Decrease Compared with 1937
Average Mileage Operated	926.76	-3.54
RAILWAY OPERATING REVENUES	\$14,288,786	-\$2,093,614
Maintenance of way	1,698,418	-250,233
Maintenance of equipment	2,248,658	-563,064
Transportation—Rail	5,892,110	-405,739
TOTAL OPERATING EXPENSES	11,242,093	-1,288,709
Operating ratio	78.68	+2.20
NET REVENUE FROM OPERATIONS	3,046,692	-804,904
Railway tax accruals	948,000	+53,000
Railway operating income	2,098,692	-857,904
Equipment rents—		
Net Dr.	932,446	+54,575
Joint facility rents—		
Net Dr.	498,981	-243,162
NET RAILWAY OPERATING INCOME	667,265	-669,317
Other income	247,804	-4,087
TOTAL INCOME	915,069	-673,404
Rent for leased roads	158,636	+3,026
Interest on funded debt	1,604,111	-5,745
TOTAL FIXED CHARGES	2,271,734	-1,980
NET DEFICIT	\$1,387,649	+\$671,825

CHICAGO, BURLINGTON & QUINCY.—Acquisition and Quincy, Omaha & Kansas City Abandonment.—Examiner W. J. Schutrumpf has recommended in a proposed report that the Interstate Commerce Commission grant the application designed to effectuate the plan whereby the Q. O. & K. C. would abandon the 140-mile seg-

ment of its line between Milan, Mo., and North Kansas City, while the Burlington would acquire for operation as a branch line the remaining 103-mile segment between Milan and Quincy, Ill. As noted in previous issues of *Railway Age* this plan, which contemplates liquidation of the Q. O. & K. C., grew out of an original proposal of that road to abandon its entire line because the Burlington could no longer advance the funds necessary to meet deficits. Representatives of railroad labor asked for conditions to protect employees adversely affected; but attachment of no such condition was recommended by the examiner who held that the recent I. C. C. decision in the case involving the proposed lease by the Chicago, Rock Island & Pacific of the properties of the Chicago, Rock Island & Gulf “is not controlling.”

CHICAGO, ROCK ISLAND & PACIFIC.—New Directors.—Charles F. Grey, Chicago, and Paul H. Nitze, New York, have been elected directors. The new directors fill one vacancy and a directorship left open by the retirement of M. J. Healey, Kansas City, Mo.

CHICAGO, ROCK ISLAND & PACIFIC.—Trackage Rights.—This road has applied to the Interstate Commerce Commission for authority to acquire trackage rights over a 24-mile section of the Davenport, Rock Island & Northwestern between Davenport, Iowa, and Shaffton, and over 1.45 miles of Chicago, Milwaukee, St. Paul & Pacific tracks in the city of Davenport. The application points that the proposed arrangement would give the Rock Island a Shaffton-Davenport route about 39 miles shorter than its present line, a portion of which it plans to abandon.

DENVER & SALT LAKE.—Annual Report.—The 1938 annual report of this company shows net income, after interest and other charges, of \$846, a decrease of \$7,844 as compared with net income in 1937. Selected items from the income statement follow:

	1938	Increase or Decrease Compared with 1937
RAILWAY OPERATING REVENUES	\$2,264,603	-\$541,652
Maintenance of way	272,014	-189,170
Maintenance of equipment	458,029	-196,835
Transportation	693,143	-117,657
TOTAL OPERATING EXPENSES	1,570,351	-451,801
NET REVENUE FROM OPERATIONS	694,252	-89,851
Railway tax accruals	353,310	+36,033
Hire of equipment—		
Net Dr.	48,047	-61,577
Joint facility rents—Net	584,330	+11,371
NET RAILWAY OPERATING INCOME	877,224	-52,936
TOTAL INCOME, OPERATING AND OTHER INCOME	887,275	-57,633
Rent for leased roads	429,361	-23,984
Interest on funded debt	445,000	-27,500
TOTAL DEDUCTIONS FROM GROSS INCOME	886,428	-49,789
NET INCOME	\$846	-\$7,844

DAVENPORT, ROCK ISLAND & NORTH-

WESTERN.—Extension of Line.—This road has applied to the Interstate Commerce Commission for authority to extend its line by acquiring a 13.8-mile segment of the Clinton, Davenport & Muscatine, extending from a point in Davenport, Iowa, through Bettendorf to LeClaire. The application states that the applicant has been advised that the I.C.C. has no jurisdiction over the proposed transaction, but it filed in order to avoid confusion and delay; it asks denial if the commission finds that it has no jurisdiction. The Clinton, Davenport & Muscatine, as noted in the *Railway Age* of May 6, page 800, has applied to the commission for authority to abandon its 35.9-mile electric line between Davenport, Iowa, and Clinton.

GRAND TRUNK WESTERN.—New Director.—Frank E. McAllister, Kalamazoo, Mich., has been elected a director to succeed George W. Dixon, who died in September, 1938.

GREAT WESTERN.—Abandonment.—This road has applied to the Interstate Commerce Commission for authority to abandon its 1.66-mile Duke branch, extending from Maloy, Colo., to Duke.

ILLINOIS CENTRAL SYSTEM.—Annual Report.—The 1938 annual report of this system shows net income, after interest and other charges, of \$1,222,874, a decrease of \$840,967 as compared with net income in 1937. Selected items from the combined income account follow:

	1938	Increase or Decrease Compared with 1937
RAILWAY OPERATING REVENUES	\$105,415,827	-\$8,599,981
TOTAL OPERATING EXPENSES	76,624,579	-8,287,934
NET REVENUE FROM OPERATIONS	28,791,247	-312,046
Railway tax accruals	9,708,122	+1,634,044
Railway operating income	19,083,125	-1,946,091
Hire of equipment—Dr.	2,478,114	-1,065,411
Joint facility rents	1,253,430	-33,280
NET RAILWAY OPERATING INCOME	16,927,169	-954,644
Other income	869,428	-98,145
TOTAL INCOME	17,796,598	-1,052,790
Rent for leased roads	1,093,755	+135,031
Interest on funded debt	15,160,951	-375,138
TOTAL FIXED CHARGES	16,573,723	-211,822
NET INCOME	\$1,222,874	-\$840,967

KANSAS CITY SOUTHERN.—New Director Elected.—W. N. Deramus, executive vice-president of this road was elected director at the annual meeting held in Kansas City May 9, to fill the vacancy created by the resignation of C. E. Johnston, former president of the road.

LOUISIANA, ARKANSAS & TEXAS.—Bond Application Withdrawn.—The application having been withdrawn on April 25, the Interstate Commerce Commission, Division 4, has dismissed this road's request of September 21, 1936, as amended June 21 and June 25, 1937, for authority (a) to issue \$194,000 of first mortgage five per cent bonds, series B, and (2) to reduce the

Continued on next left-hand page

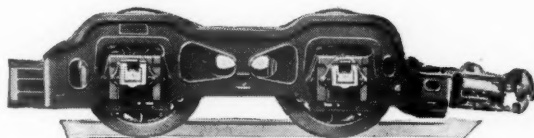
**1030
PASSENGERS
DAILY**



An outstanding accomplishment

During July and August of last year, the Southern Pacific "Daylight" averaged 1030 passengers daily between San Francisco and Los Angeles. Here is convincing evidence that modern, streamlined, de luxe equipment designed to give the passengers the utmost in appointments, will stimulate railroad travel. » »

To complete the comfort of the passengers, comfortable starts must be made. » » The Booster*-equipped locomotives that power the "Daylight" have an additional 12,500 lbs. of tractive effort available to insure smooth, even starts and maintain the high standards of comfort set by the de luxe equipment.



*Trademark Registered United States Patent Office



FRANKLIN RAILWAY SUPPLY COMPANY, INC.

**NEW YORK
CHICAGO
MONTREAL**

interest rate on \$750,000 of first mortgage bonds, series A, from six to five per cent.

MINNEAPOLIS & ST. LOUIS.—Annual Report.—The 1938 annual report of this road shows net income, after interest and other charges, of \$652,626, an increase of \$173,912 as compared with net income in 1937. Selected items from the income statement follow:

	1938	Increase or Decrease Compared with 1937
Average Mileage Operated	1,524.13	-6.50
RAILWAY OPERATING REVENUES	\$9,079,676	+\$419,591
Maintenance of way	1,462,630	+171,690
Maintenance of equipment	1,465,308	+90,312
Transportation	3,375,972	-123,767
TOTAL OPERATING EXPENSES	7,287,166	+163,539
Operating ratio	80.26	-2.0
NET REVENUE FROM OPERATIONS	1,792,510	+256,051
Railway tax accruals	549,199	+211,762
Railway operating income	1,243,310	+44,289
Equipment rents—		
Net Dr.	514,704	-138,656
Joint facility rents—		
Net Dr.	48,977	+7,882
NET RAILWAY OPERATING INCOME	679,629	+175,063
Other income	70,678	-14,132
GROSS INCOME	750,307	+160,931
Rent for leased roads and equipment	24,180	-2,236
Interest on funded debt	26,629	-1,504
TOTAL DEDUCTIONS FROM GROSS INCOME	97,681	-12,980
NET INCOME	\$652,626	+\$173,912

MINNEAPOLIS, ST. PAUL & S. S. MARIE. Annual Report.—The 1938 annual report of this company shows net deficit, after interest and other charges, of \$6,638,309, an increase of \$903,212 as compared with net deficit in 1937. Selected items from the income statement follow:

	1938	Increase or Decrease Compared with 1937
RAILWAY OPERATING REVENUES	\$13,692,717	-\$1,308,713
TOTAL OPERATING EXPENSES	12,144,255	-646,577
NET REVENUE FROM OPERATIONS	1,548,462	-662,135
Net equipment, Jt. facility rents and taxes—Dr.	1,703,358	+261,321
NET RAILWAY OPERATING INCOME	*154,896	-923,456
Other income	173,300	+256,909
TOTAL INCOME	18,404	-666,547
Rent for leased roads, interest on equipment obligations and misc. accts.	54,126	-16,707
BALANCE	*35,721	-649,838
Interest and discount on bonds, notes, advances, etc.	6,602,587	+253,373
NET DEFICIT	\$6,638,309	+\$903,212

* Deficit

MISSOURI PACIFIC.—Abandonment.—This road has applied to the Interstate Commerce Commission for authority to abandon an 11.9-mile line between Charleston, Mo., and Crosno.

MINNEAPOLIS & ST. LOUIS.—Abandonment.—Examiner R. Romero has recom-

mended in a proposed report that the Interstate Commerce Commission's Division 4 grant the application of this road for authority to abandon a branch line extending from Corwith, Iowa, to St. Benedict, 6.6 miles.

MINNEAPOLIS & ST. LOUIS.—Abandonment Application Withdrawn.—At the request of this road the Interstate Commerce Commission, Division 4, has dismissed an application for authority to abandon a line extending from Minerva Junction, Iowa, to Story City.

MISSOURI PACIFIC.—New Director.—Robert McKinney, vice-president, treasurer and a director of the Alleghany Corporation, has been elected a director of the Missouri Pacific to succeed Alva Bradley.

MONTANA.—Approval of R. F. C. Loan Denied.—The Interstate Commerce Commission, Division 4, has denied this road's application for approval of a \$5,850 loan from the Reconstruction Finance Corporation. The decision's conclusion was that "the present and prospective earning power of the applicant and the security offered as a pledge for the requested loan are not such as afford reasonable assurance of its ability to repay the loan."

NORTHWESTERN PACIFIC.—Abandonment of Ferry Operations.—This road has applied to the Interstate Commerce Commission for authority to abandon ferry operations in San Francisco Bay—between Sausalito, Calif., and San Francisco, 6.5 miles, and between Sausalito and Tiburon, 2.25 miles.

NORTHERN PACIFIC.—Annual Report.—The 1938 annual report of this road shows net deficit, after interest and other charges, of \$4,322,413, as compared with net income of \$117,741 in 1937. Selected items from the income account follow:

	1938	Increase or Decrease Compared with 1937
Average Mileage Operated	6,721.05	-4.38
RAILWAY OPERATING REVENUES	\$57,021,584	-\$7,829,614
TOTAL OPERATING EXPENSES	47,056,727	-4,954,934
NET REVENUE FROM OPERATIONS	9,964,857	-2,874,679
Railway tax accruals	6,836,321	+971,494
Railway operating income	3,128,535	-3,846,174
Equipment rents—Net Cr.	733,012	-491,434
Joint facility rents—		
Net Cr.	2,435,809	-16,036
NET RAILWAY OPERATING INCOME	6,297,357	-4,353,644
Other income	4,263,099	+144,041
GROSS INCOME	10,560,457	-4,209,603
Rent for leased roads and equipment	95,309	+44,919
Interest on funded debt	14,437,086	+82,687
TOTAL FIXED CHARGES	14,643,339	+231,665
NET INCOME	*\$4,322,413	-\$4,440,155

* Deficit.

OREGON, PACIFIC & EASTERN.—Reorganization Plan.—The Interstate Commerce Commission, Division 4, has approved a plan of reorganization for this company, modifying Examiner T. K. Carpenter's recommendations (see *Railway*

Age of December 3, 1938, page 827) "by a small increase in the number of shares of stock, the authorization of a voting trust, and in certain minor respects." The plan as approved by the commission provides for a total capitalization of \$303,000, including 15,132 shares of five per cent preferred stock having a par value of \$10 a share, and 15,137 shares of no-par common; the examiner had recommended a total capitalization of \$300,000 with 15,000 shares of preferred and 15,000 shares of common. Commissioner Porter, concurring in part, objected to no-par common; other things being equal he thinks it is always better to give stock a par value, because "to do so facilitates setting up the new investment account and helps the prospective purchaser."

PITTSBURGH & LAKE ERIE.—New Director Elected.—John J. Heard of Pittsburgh, Pa., was elected a director of the Pittsburgh & Lake Erie at a recent meeting of the board of directors.

PITTSBURGH & LAKE ERIE.—Annual Report.—The 1938 annual report of this road shows net income, after interest and other charges, of \$1,698,521, a decrease of \$2,341,008 as compared with net income for 1937. Selected items from the income account follow:

	1938	Increase or Decrease Compared with 1937
Average Mileage Operated	232.96	-0.87
RAILWAY OPERATING REVENUES	\$14,179,067	-\$8,890,636
TOTAL OPERATING EXPENSES	12,799,652	-6,481,430
Operating ratio	90.27	+6.69
NET REVENUE FROM OPERATIONS	1,379,414	-2,409,206
Railway tax accruals	1,570,567	-347,529
Railway operating income	*\$191,153	-2,061,677
Equipment rents—		
Net Cr.	1,971,267	-291,711
Joint facility rents—		
Net Cr.	23,051	+18,724
NET RAILWAY OPERATING INCOME	1,803,165	-2,334,664
Other income	251,516	-234,382
TOTAL INCOME	2,054,682	-2,569,046
Rent for leased roads and equipment	40,879	-5,547
Interest on funded debt	.....	-4,645
TOTAL FIXED CHARGES	42,745	-11,501
NET INCOME	\$1,698,521	-\$2,341,008

* Deficit.

ROCK ISLAND LINES.—Annual Report.—The 1938 annual report for the Chicago, Rock Island & Pacific and its subsidiary companies, shows net deficit, after interest and other charges, of \$11,391,620, an increase of \$1,834,740 as compared with net deficit in 1937. Selected items from the income account follow:

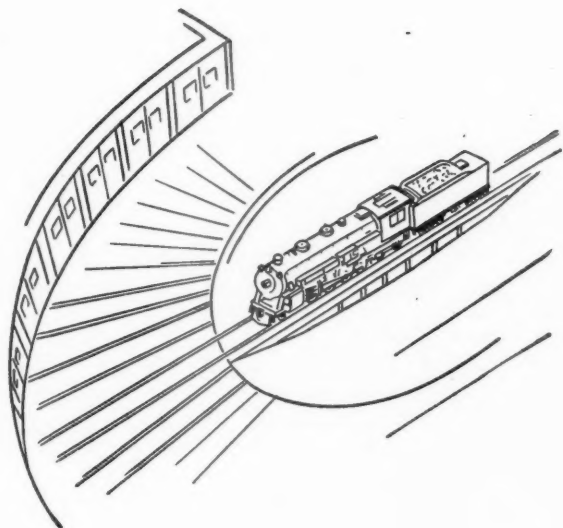
	1938	Increase or Decrease Compared with 1937
RAILWAY OPERATING REVENUES	\$77,777,807	-\$3,865,443
Maintenance of way	11,388,312	-707,580
Maintenance of equipment*	10,875,789	-602,159
Transportation	31,442,861	-2,035,278

Continued on next left-hand page

BE SURE

No Arch Brick

Is Missing



There's More to SECURITY ARCHES Than Just Brick



In these days of rigid economy, don't draw the line too fine and let a locomotive leave the roundhouse with an imperfect Arch due to lack of supplies.

A single missing Arch Brick has a mighty serious effect on steaming and on the efficiency of the locomotive.

Today, a dollar's worth of fuel means more than ever before. To spend it effectively, every Locomotive Arch should be maintained in perfect condition.

Be sure your stocks on hand are ample to provide fully for all locomotive requirements, so that locomotive efficiency will not suffer.

**HARBISON-WALKER
REFRACTORIES CO.**

Refractory Specialists



**AMERICAN ARCH CO.
INCORPORATED**

60 EAST 42nd STREET, NEW YORK, N. Y.

*Locomotive Combustion
Specialists*

TOTAL OPERATING EXPENSES	64,867,058	-3,643,742
NET REVENUE FROM OPERATIONS	12,910,748	-221,700
Railway tax accruals	5,739,903	+1,404,980
Railway operating income	7,170,845	-1,626,681
Equipment rents—Dr.	3,527,866	+304,281
Joint facility rents—Dr.	1,130,134	+14,900
NET RAILWAY OPERATING INCOME	2,512,843	-1,945,863
Other income	548,237	+22,330
TOTAL INCOME	3,061,081	-1,923,532
Rent for leased roads and equipment	238,689	+79,139
Total interest	14,086,623	-185,939
NET DEFICIT	\$11,391,620	+\$1,834,740

* Excluding Depreciation.

RIO GRANDÉ, MICOLITHIC & NORTHERN.—Abandonment.—This company has applied to the Interstate Commerce Commission for authority to abandon its entire line extending from a point on the Texas & New Orleans main line near Mica, Tex., to Micolithic, 6.4 miles.

ST. LOUIS SOUTHWESTERN.—Annual Report.—The 1938 annual report of this company shows net deficit, after interest and other charges, of \$926,877, a decrease of \$17,286 as compared with net deficit in 1937. Selected items from the income account follow:

	1938	Increase or Decrease Compared with 1937
Average Mileage Operated	1,705.55	-24.00
RAILWAY OPERATING REVENUES	\$18,492,202	-\$2,623,780
Maintenance of way	2,561,575	-851,171
Maintenance of equipment	2,710,247	-828,330
Transportation	6,410,412	-591,070
TOTAL OPERATING EXPENSES	13,564,474	-2,290,050
NET REVENUE FROM OPERATIONS	4,927,727	-333,729
Railway tax accruals	1,249,409	+246,520
Railway operating income	3,678,318	-580,250
Net rents—Dr.	1,658,297	-373,093
NET RAILWAY OPERATING INCOME	2,020,021	-207,157
Other income	82,871	-11,050
TOTAL INCOME	2,102,892	-218,207
Rent for leased roads	3,049	-11
TOTAL FIXED CHARGES	3,015,176	-233,491
NET DEFICIT	\$926,877	-\$17,286

TOLEDO, PEORIA & WESTERN.—Annual Report.—The 1938 annual report of this road shows net income, after interest and other charges, of \$265,477, an increase of \$12,921 as compared with net income in 1937. Selected items from the income account follow:

	1938	Increase or Decrease Compared with 1937
RAILWAY OPERATING REVENUES	\$2,149,273	-\$243,962
Maintenance of way	477,231	-84,206
Maintenance of equipment	139,444	-37,619
Transportation	504,881	-83,060
TOTAL OPERATING EXPENSES	1,448,842	-235,005
NET REVENUE FROM OPERATIONS	700,430	-8,958

Railway tax accruals	188,101	+11,544
Equipment rents—Net Dr.	202,073	-20,484
Joint facility rents—Net Cr.	18,813	-810
NET RAILWAY OPERATING INCOME	329,070	-826
Other income	20,097	-1,394
GROSS INCOME	349,167	-2,220
Interest on funded debt	68,820	-4,499
TOTAL DEDUCTIONS FROM GROSS INCOME	83,689	-15,141
NET INCOME	\$265,477	+\$12,921

ST. LOUIS SOUTHWESTERN.—Abandonment.—This road has applied to the Interstate Commerce Commission for authority to abandon a 40-mile line between Corsicana, Tex., and Hillsboro.

UNION PACIFIC.—Abandonment of Steamboat Operation.—The Interstate Commerce Commission, Division 4, has dismissed for want of jurisdiction the application of this road and the Oregon-Washington Railroad & Navigation Company for authority to abandon a freight steamboat operation on Snake river, between Rice's Bar, Wash., and Couse Creek.

WESTERN PACIFIC.—Compensation of Trustees' General Counsel.—The Interstate Commerce Commission, Division 4, has issued an order in this road's reorganization proceeding, fixing the maximum compensation of Allan P. Mathew, general counsel for the trustees, at \$18,000 per year, beginning April 1.

WESTERN PACIFIC.—Annual Report.—The 1938 annual report for this road shows net deficit, after interest and other charges, of \$4,450,489, an increase of \$999,524 as compared with net deficit in 1937. Selected items from the income account follow:

	1938	Increase or Decrease Compared with 1937
Average Mileage Operated	1,858.06	+6.49
RAILWAY OPERATING REVENUES	\$14,584,678	-\$1,726,294
TOTAL OPERATING EXPENSES	13,542,194	-1,769,514
NET REVENUE FROM OPERATIONS	1,042,484	+43,220
Railway tax accruals	1,034,499	+262,424
Railway operating income	7,984	-219,204
Equipment rents—Net	1,080,661	+108,663
Joint facility rents—Net	140,226	-16,814
NET RAILWAY OPERATING DEFICIT	932,450	+127,356
TOTAL DEDUCTIONS	274,881	-39,991
TOTAL INTEREST DEDUCTIONS	3,575,956	+123,125
NET DEFICIT	\$4,450,489	+\$999,524

Average Prices of Stocks and Bonds

	May 9	Last week	Last year
Average price of 20 representative railway stocks..	28.28	27.10	24.25
Average price of 20 representative railway bonds..	58.43	57.34	58.02

Dividends Declared

Cleveland & Pittsburgh.—Guaranteed, 87½¢, quarterly; Special Guaranteed, 50¢, quarterly, both payable June 1 to holders of record May 10.
Pittsburgh, Youngstown & Ashtabula.—Preferred, \$1.75, quarterly, payable June 1 to holders of record May 20.

Railway Officers

EXECUTIVE

J. B. Brantly, assistant to vice-president in charge of traffic of the Atlantic Coast Line, with headquarters at Wilmington, N. C., has been appointed assistant vice-president.

A. R. Ayers, general manager of the New York, Chicago & St. Louis (Nickel Plate), with headquarters at Cleveland, Ohio, has been elected president of the Detroit & Toledo Shore Line, and **P. D. Fitzpatrick**, general manager of the Grand Trunk Western, with headquarters at Detroit, Mich., has been elected vice-president.

FINANCIAL, LEGAL AND ACCOUNTING

Edwin F. Browder, cashier of the Panhandle & Santa Fe at Amarillo, Tex., has been promoted, effective June 1, to secretary-treasurer, with the same headquarters, succeeding **J. N. Freeman**, who will retire on that date.

Arnot L. Sheppard has been appointed attorney for the Terminal Railroad Association of St. Louis, with headquarters at St. Louis, Mo., succeeding **Walter N. Davis**, whose promotion to general attorney was announced in the *Railway Age* of May 6.

Frank S. Pollard, tax agent on the Chicago, Burlington & Quincy, with headquarters at Lincoln, Neb., has been appointed special representative of the land and tax departments, with headquarters at Chicago. The land and tax offices of the Burlington have been moved from Lincoln to Chicago, and the office of tax agent at Lincoln has been abolished.

John B. Sutton has been appointed general solicitor for the Southern division of the Atlantic Coast Line, with headquarters at Jacksonville, Fla., succeeding **W. E. Kay**, deceased. Mr. Sutton was born in Lakeland, Fla., and was graduated from the University of Florida in 1914 with the degree of LL.B. He entered the practice of law in Tampa, Fla., in January, 1915, and later served for four years as a member of the State Board of Control, and for two years as a member of the State Board of Law Examiners. Mr. Sutton became division counsel for the Atlantic Coast Line on January 1, 1923, which position he held until his recent appointment as general solicitor.

OPERATING

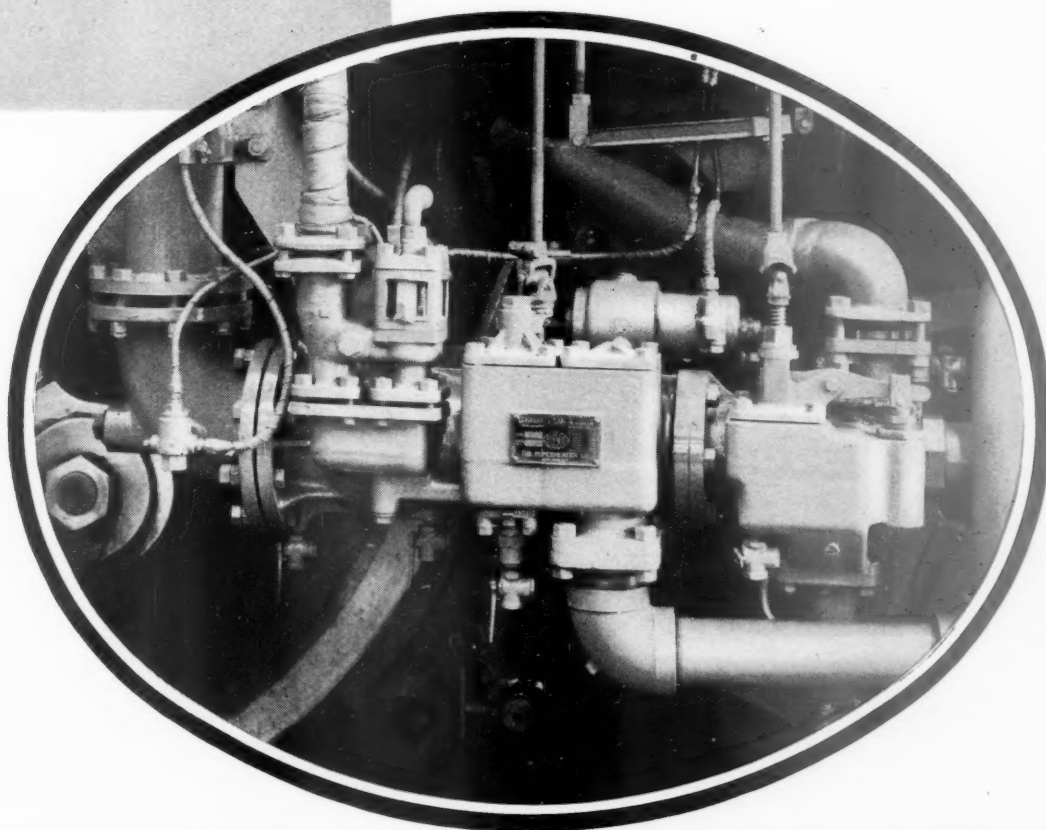
Howard W. Hale, whose promotion to superintendent of the Northern division of the St. Louis-San Francisco, with headquarters at Fort Scott, Kan., was announced in the *Railway Age* of May 6, was born in DeKalb, Tex., on March 21, 1890, and entered railway service on June 1, 1908,

Continued on next left-hand page

Additional
Boiler Horsepower
at \$4⁰⁰ - \$6⁰⁰ per Hp.

by virtue of the heat in exhaust
steam returned to the boiler through
the medium of

**ELESCO EXHAUST STEAM
INJECTORS**



A-1321

THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, INC.

60 East 42nd Street, NEW YORK

122 S. Michigan Ave., CHICAGO

Canada: THE SUPERHEATER COMPANY, LTD., MONTREAL

Superheaters • Exhaust Steam Injectors • Feed Water Heaters • American Throttles • Pyrometers • Steam Dryers

as a telegraph operator on the Frisco. In 1913, he was promoted to dispatcher, and in 1915, to chief dispatcher. Mr. Hale was advanced to assistant superintendent at Chaffee, Mo., in 1922, and was later transferred successively to Salpula, Okla., Francis, Okla., Salpula and West Tulsa, Okla. On April 1, 1937, he was appointed special representative of the general manager, with headquarters at Springfield, Mo., and held that position until his recent promotion which was effective May 1.

Joseph F. Davis, whose promotion to general superintendent of the Western district of the Missouri Pacific, with headquarters in Kansas City, Mo., was announced in the *Railway Age* of April 29, was born at Brinkley, Ark., on April 25, 1878, and graduated from Ouachita College in Arkansas. He entered railway service in 1897 in the maintenance of way department of the St. Louis Southwestern, serving successively as a trackman, track foreman, extra gang foreman and brakeman until 1903. In that year Mr. Davis went with the Missouri Pacific as an extra gang foreman at Little Rock, Ark., and in 1906 he was promoted to roadmaster, with



Joseph F. Davis

headquarters at Aurora, Mo. He was later transferred successively to Texarkana, Ark., and Gurdon, Ark. Following thirteen years service as a roadmaster Mr. Davis was promoted to general roadmaster, with headquarters at McGehee, Ark., and in 1920, was advanced to division engineer at Little Rock. On June 1, 1926, he was promoted to assistant superintendent and two years later he was advanced to superintendent of the Omaha division with headquarters at Falls City, Neb. Mr. Davis was appointed district engineer at Little Rock in May, 1933, and the following year he was made acting superintendent of the Arkansas division, with the same headquarters, later being promoted to superintendent of that division, the position he held at the time of his recent promotion.

C. W. Exline, whose promotion to superintendent of the Illinois division and the St. Louis Terminal division of the Missouri Pacific and that section of the Missouri-Illinois lying east of the Mississippi river, with headquarters at St. Louis, Mo., was announced in the *Railway Age* of April 29, entered railway service in

1904 as a car repairer on the Missouri Pacific. He later transferred to train service and served as a brakeman and con-



C. W. Exline

ductor. In 1926, he was promoted to assistant trainmaster and later that year he was advanced to trainmaster of the Illinois division. He was transferred to Little Rock, Ark., in 1933, and three years later he was promoted to assistant superintendent, with headquarters at Wynne, Ark., the position he held at the time of his recent promotion.

As reported in the *Railway Age* of May 6, **F. A. Bogue** has been appointed superintendent of safety of the Chicago, Rock Island & Gulf, with headquarters at Chicago, succeeding **L. F. Shedd**.

Mr. Bogue was born in Chicago, on January 31, 1879, and entered railway service on July 1, 1900, as a clerk in the office of the operating vice-president of the Atchison, Topeka & Santa Fe at Chicago. He was subsequently transferred to Topeka, Kan., and La Junta, Colo., On July 5, 1905, Mr. Bogue went with the Rock Island as a clerk in the office of the general manager at Topeka, Kan., later advancing through several positions to chief clerk to the general manager at Chicago. In December, 1919, he was appointed pas-



F. A. Bogue

senger trainmaster at Chicago and in September, 1922, he was advanced to trainmaster at Des Moines, later being transferred to Cedar Rapids, Iowa, and to

Blue Island, Ill. Mr. Bogue was promoted to superintendent of the Nebraska-Colorado division, with headquarters at Fairbury, Neb., in June, 1929, and in October of that year he was transferred to the Iowa division, with headquarters at Des Moines. In 1937, he was appointed general superintendent of the Chicago, Rock Island & Gulf, with headquarters at Ft. Worth.

As reported in the *Railway Age* of May 6, **H. T. Livingston** has been appointed superintendent of the Chicago, Rock Island & Gulf, with headquarters at Little Rock, Ark., replacing **C. B. Pratt**, transferred.

Mr. Livingston was born at Golden City, Mo., on November 10, 1888, and graduated in civil engineering from the University of Missouri. Following his graduation he taught mathematics at the Santa Monica Military Academy in California and served as an assistant in the engineering department of the Southern Pacific at Mojave, Cal. He entered the service of the Rock Island on May 15, 1909, as an instrumentman at Topeka, Kan., and in 1915, after occupying various



H. T. Livingston

minor positions he was promoted to assistant engineer on the Iowa division, at Cedar Rapids, Iowa. In 1916, he was promoted to master carpenter at Cedar Rapids and in 1917, he enlisted in the United States Army. During the World War he served in France as captain of Company E, 313th Engineers, 88th division. Mr. Livingston returned to the Rock Island in 1919 as division engineer of the Minnesota division, with headquarters at Manly, Iowa, and was subsequently transferred to Des Moines, Iowa, and Little Rock, Ark. On January 16, 1930, he was promoted to engineer of construction, with headquarters at Chicago and on May 16, 1936, he was appointed acting assistant superintendent at Little Rock, Ark. On July 1, 1936, he was advanced to district maintenance engineer at El Reno.

TRAFFIC

William L. Klink, district passenger agent in the office of the passenger traffic manager of the Pennsylvania, with headquarters at Philadelphia, Pa., has been

ALCO



Rods

Alco forgings can save you money in many ways

American Locomotive Company

80 Church Street

New York, N. Y.

appointed division passenger agent at Harrisburg, Pa., succeeding **N. S. Longaker**, deceased.

C. E. Crane has been appointed general eastern agent of the Savannah & Atlanta, with headquarters at New York.

Leslie B. Grantham, assistant general agent on the Chicago & Eastern Illinois at Memphis, Tenn., has been promoted to general agent at that point, succeeding **D. W. Agnew**, deceased.

William J. Ford, whose promotion to general freight agent on the Chicago, Rock Island & Pacific, with headquarters at Chi-



William J. Ford

cago, was announced in the *Railway Age* of May 6, was born at New Orleans, La., on July 27, 1892. He entered the service of the Rock Island in 1921, as a traveling freight agent at New Orleans, La., and on March 1, 1927, he was promoted to general agent at New Orleans. His promotion to general freight agent was effective May 1.

H. D. Wilkerson, whose appointment as general freight agent of the Norfolk & Western at Columbus, Ohio, was announced in the *Railway Age* of May 6, was born at Prospect, Va. He entered the service of the Norfolk & Western 41 years ago as stenographer-clerk at Richmond, Va., and in 1908 he was promoted to commercial agent at Pittsburgh, Pa. Mr.



H. D. Wilkerson

Wilkerson was appointed general agent at Pittsburgh in 1932, becoming assistant gen-

eral freight agent at Columbus two years later, which position he held until his recent appointment as general freight agent.

C. F. Keeley, whose appointment as assistant freight traffic manager of the Norfolk & Western at Roanoke, Va., was noted in the *Railway Age* of May 6, was born in Roanoke and began working for the N. & W. as a stenographer in the



C. F. Keeley

freight traffic department on June 10, 1909. Later, he served for a short time in the motive power department, but returned to the freight traffic department in 1912. Mr. Keeley was promoted to rate clerk in 1915, and on March 1, 1925, was appointed clerk to the commerce agent, later becoming commerce agent. He was promoted to assistant general freight agent six years later and was promoted again in 1937 with the same title.

S. S. Hosp has been appointed general freight agent in charge of solicitation in Eastern territory, Norfolk & Western, with headquarters at Roanoke, Va., as noted in the *Railway Age* of May 6. Mr. Hosp was born at Moline, Ill., and entered the service of the Norfolk &



S. S. Hosp

Western as commercial agent at Minneapolis, Minn., on July 1, 1920. He served in that capacity until 1934, when he was promoted to general agent at Pittsburgh, Pa., the position he held until his recent appointment as general freight agent.

E. M. Dudley, whose appointment as general freight agent in charge of solicitation in Western territory, Norfolk &



E. M. Dudley

Western, with headquarters at Roanoke, Va., was noted in the *Railway Age* of May 6, was born in Schuyler, Va. Mr. Dudley entered the service of the Norfolk & Western in 1918 as a clerk in the transportation department at Petersburg, Va. He was promoted to chief clerk in the division freight agent's office at Winston-Salem, on April 1, 1925, and a year later, was appointed assistant foreign freight agent at Chicago. Mr. Dudley became foreign freight agent in 1936, and a year later became general western freight agent, Chicago, the position he held until his recent appointment.

F. S. Baird, whose appointment as assistant freight traffic manager of the Norfolk & Western at Roanoke, Va., was noted in the *Railway Age* of May 6, was born at Carbon Hill, Ohio. He entered the



F. S. Baird

service of that road on May 1, 1910, as a stenographer in the office of the assistant general freight agent at Columbus, Ohio. He was later promoted to clerk and chief clerk and in 1925 went to Roanoke as coal freight agent. Two years later Mr. Baird was promoted to assistant general freight agent and since has been promoted twice, in 1931 and 1937, retaining the same title.

J. O. Younger, commercial agent for
(Continued on page 857)

Annual Report

New York Central Railroad Company

To the Stockholders of

THE NEW YORK CENTRAL RAILROAD COMPANY:

The Board of Directors herewith submits its report for the year ended December 31, 1938, with statements showing the income and the financial condition of the company.

The Year's Business

The recession in business, beginning in the late summer of 1937 and continuing throughout the first eight months of 1938, was reflected in our revenues in each of those months. Commencing with October, there was an improvement in general business conditions, and this resulted in a somewhat more favorable showing in the latter months of the year. The total operating revenue for the year amounted to \$298,681,195.21, a decrease of \$67,544,931.25 (18.44%), as compared with 1937.

Revenue freight handled amounted to 98,593,108 tons, a decrease of 32,956,337 tons (25.05%). Freight revenue amounted to \$202,781,708.24, a decrease of \$54,759,743.34 (21.26%), due to the decrease in volume of traffic handled.

Tonnage of commodities handled, by classes, together with revenue therefrom (before deductions for absorbed switching, overcharges, etc.) compared with the previous year was:

Class	Tons handled	Increase or Decrease	Revenue	Increase or Decrease
Products of Agriculture.....	8,139,971	359,958 I	\$19,703,549	\$820,177 I
Animals and products.....	2,195,154	60,610 D	15,681,042	481,059 I
Products of mines.....	57,603,546	19,540,497 D	64,995,202	16,174,738 D
Products of forests.....	2,147,265	948,088 D	4,953,252	2,096,266 D
Manufactures and miscellaneous.....	26,691,671	12,078,804 D	89,042,363	36,349,823 D
All less than carload traffic.....	1,815,501	688,296 D	18,241,721	4,894,917 D
TOTAL.....	98,593,108	32,956,337 D	\$212,617,129	\$58,213,608 D

Revenue passengers carried totaled 48,215,444 a decrease of 2,956,385 (5.78%). Interline passengers decreased 365,182 (12.95%), local passengers decreased 1,723,709 (9.46%), and commutation passengers decreased 867,494 (2.88%). Passenger revenue amounted to \$60,313,893.49, a decrease of \$6,091,670.44 (9.17%).

Income Account for the Year

INCLUDING ALL LEASED LINES

	Year Ended Dec. 31, 1938	Year Ended Dec. 31, 1937	+Increase or —Decrease
OPERATING INCOME	11,070.27 miles operated	11,079.52 miles operated	9.25 miles
RAILWAY OPERATIONS			
Railway operating revenues.....	\$298,681,195.21	\$366,226,126.46	—\$67,544,931.25
Railway operating expenses.....	237,502,382.80	284,000,438.88	—46,498,056.08
NET REVENUE FROM RAILWAY OPERATIONS	\$61,178,812.41	\$82,225,687.58	—\$21,046,875.17
Percentage of expenses to revenues.....	(79.52)	(77.55)	+(1.97)
Railway tax accruals.....	\$32,723,604.74	\$32,160,527.04	+\$563,077.70
RAILWAY OPERATING INCOME	\$28,455,207.67	\$50,065,160.54	—\$21,609,952.87
Equipment rents, net debit.....	\$10,106,754.72	\$10,722,837.90	—\$616,083.18
Joint facility rents, net debit.....	2,765,977.20	3,314,055.39	—548,078.19
NET RAILWAY OPERATING INCOME	\$15,582,475.75	\$36,028,267.25	—\$20,445,791.50
OTHER INCOME			
Revenues from miscellaneous operations.....	\$551,439.55	\$710,121.30	—\$158,681.75
Income from lease of road and equipment.....	487,235.74	551,341.14	—64,105.40
Miscellaneous rent income.....	3,356,661.07	3,525,522.54	—168,861.47
Miscellaneous non-operating physical property.....	1,326,068.00	1,335,227.85	—9,159.85
Separately operated properties—profit.....	288,047.04	527,219.76	—239,172.72
Dividend income.....	5,455,252.05	11,675,123.26	—6,219,871.21

(Other Income—Continued)

Income from funded securities.....	3,233,525.88	4,654,454.57	—1,420,928.69
Income from unfunded securities and accounts.....	359,679.73	1,186,281.36	—826,601.63
Income from sinking and other reserve funds.....	65,561.26	77,870.12	—12,308.86
Miscellaneous income.....	50,196.01	74,233.79	—24,037.78
TOTAL OTHER INCOME	\$15,173,666.33	\$24,317,395.69	—\$9,143,729.36
TOTAL INCOME	\$30,756,142.08	\$60,345,662.94	—\$29,589,520.89
MISCELLANEOUS DEDUCTIONS FROM INCOME			
Expenses of miscellaneous operations.....	\$434,717.84	\$552,459.25	—\$117,741.41
Taxes on miscellaneous operating property.....	76,718.81	72,275.32	+4,443.49
Miscellaneous rents.....	514,544.44	627,010.91	—112,466.47
Miscellaneous tax accruals.....	427,254.30	359,928.44	+67,325.86
Separately operated properties—Loss.....	18,919.38	648.22	+18,271.16
Miscellaneous income charges.....	207,580.26	183,664.63	+23,915.63
TOTAL MISCELLANEOUS DEDUCTIONS	\$1,679,735.03	\$1,795,986.77	—\$116,251.74
INCOME AVAILABLE FOR FIXED CHARGES	\$29,076,407.05	\$58,549,676.17	—\$29,473,269.12
FIXED CHARGES			
Rent for leased roads and equipment.....	\$22,472,195.15	\$25,163,018.97	—\$2,690,823.82
Interest on funded debt.....	25,297,503.10	26,404,466.26	—1,106,963.16
Interest on unfunded debt.....	1,461,066.00	629,578.99	+831,487.01
TOTAL FIXED CHARGES	\$49,230,764.25	\$52,197,064.22	—\$2,966,299.97
NET INCOME	\$20,154,357.20*	\$6,352,611.95	—\$26,506,969.15
*Deficit			
Equipment depreciation charges included in expenses.....	\$16,106,282.74	\$16,111,418.97	—\$5,136.23

Included in Other Income and Rent for Leased Roads and Equipment are certain intercompany transactions representing credits and corresponding debits amounting to \$3,990,620 \$5,703,048 —\$1,712,428

Also included in Other Income are items representing interest and dividends amounting to \$1,491,966 \$1,512,904 —\$20,938

received on securities of and advances to terminal and other railroad companies whose properties are jointly used by this Company, as to the major portion of which a like amount was paid by the Company to those companies as rental and included in Joint Facility Rents.

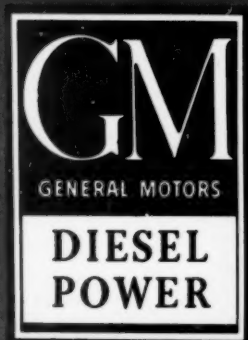
Profit and Loss Account

BALANCE TO CREDIT OF PROFIT AND LOSS, DECEMBER 31, 1937.....		\$194,657,969.49
ADDITIONS:		
Credits from retired road and equipment.....	\$116,843.82	
Donations.....	16,945.98	
Miscellaneous credits (including \$1,120,270.42 in adjustment of advances to Pittsburgh, McKeesport and Youghiogheny Railroad Company for equipment charged to income prior to July 1, 1907).....	1,608,376.95	1,742,166.75
DEDUCTIONS:		
Deficit for the year 1938.....	\$20,154,357.20	
Surplus appropriated for investment in physical property.....	409,790.70	
Debits from retired road and equipment (represents ledger value, less salvage recovered, of roadway property not required for transportation service retired during the year and charged directly to profit and loss account).....	3,216,831.22	
Miscellaneous debits.....	309,043.85	24,090,022.97
BALANCE TO CREDIT OF PROFIT AND LOSS, DECEMBER 31, 1938		\$172,310,113.27

For the Board of Directors,
F. E. WILLIAMSON, President.

(Advertisement)

From Coast to Coast Are Reducing



NORTHERN PACIFIC RY.

GREAT NORTHERN RY.

C.B. & Q.R.R.

CHICAGO GREAT WESTERN
C. & N. W. RY.

SOUTHERN PACIFIC

C.R.I. & P.

A.T. & S.F. RY. CO.

KANSAS CITY TERMINAL RY.
ST.

PHELPS DODGE CORP.

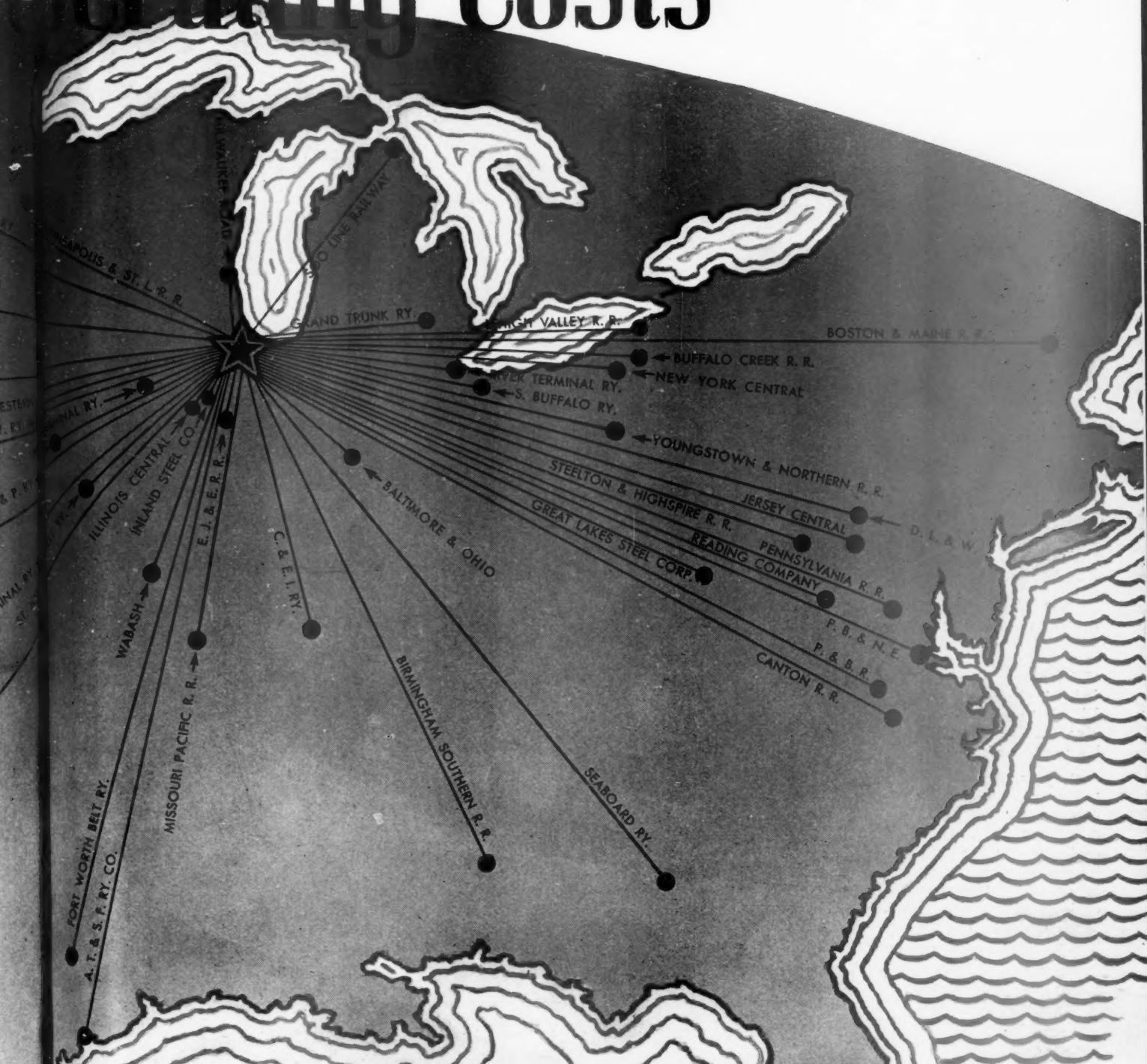
5305



5305

5305

Operating Costs



SERVICE records covering well over a million hours of operation prove conclusively that Electro-Motive Switchers have reduced locomotive costs from 50 to 75 per cent—provide faster, smoother, safer car movements and deliver most work per dollar of operating expense. That's why EMC Diesels are by far the most profitable motive power investment.

ELECTRO-MOTIVE CORPORATION

SUBSIDIARY OF GENERAL MOTORS

LA GRANGE, ILLINOIS, U. S. A.

News—Railway Officers

(Continued from page 855)

the Chicago, Rock Island & Pacific at Little Rock, Ark., has been promoted to general agent at New Orleans, replacing **William J. Ford**, whose promotion to general freight agent at Chicago was announced in the *Railway Age* of May 6. **J. W. E. Trefz**, general agent at Phoenix, Ariz., has been advanced to assistant general freight agent, with headquarters at Denver, Colo., and **F. H. Faus**, general agent, freight department, at Denver, has been appointed special representative at that point. **L. B. Hall**, perishable freight representative at Los Angeles, Cal., has been promoted to general agent at Phoenix, Ariz., relieving Mr. Trefz.

ENGINEERING AND SIGNALING

J. C. Aker, assistant engineer on the Nashville, Chattanooga & St. Louis, with headquarters at Nashville, Tenn., has been promoted to assistant chief engineer, with the same headquarters.

A. J. Gayfer, assistant division engineer on the Canadian National, with headquarters at Edmonton, Alta, has been promoted to division engineer, with headquarters at Calgary, Alta, succeeding **W. Fetherstonhaugh**, who retired on April 14.

R. H. Carter, acting division engineer on the Illinois Central, with headquarters at Chicago, has been promoted to division engineer at that point, succeeding **J. J. Desmond**, who has been assigned to other duties, with headquarters at Water Valley, Miss.

John W. Wheeler, assistant chief engineer of the Burlington Lines, with headquarters at Chicago, resigned on May 11, to take charge of contracting work for the Cities Construction Company, Hammond, Ind. A photograph and biography of Mr. Wheeler were published in the *Railway Age* of November 19, 1938, at the time of his promotion to assistant chief engineer.

G. A. Williams, main line supervisor in the office of the vice-president in charge of traffic of the Pennsylvania, at Philadelphia, Pa., has been appointed division engineer of the Conemaugh division, with headquarters at Pittsburgh, Pa., succeeding **B. W. Tyler**, who has been appointed engineer of the Washington Terminal at Washington, D. C. **P. W. Triplett**, assistant division engineer of the New York division, has been appointed division engineer of the Renovo division at Erie, Pa., succeeding **J. D. Morris**, who has been transferred to the Philadelphia Terminal division, as noted in the *Railway Age* of April 22.

William S. Melton, whose retirement as superintendent of telegraph and telephone of the Western lines of the Southern, on May 1, was announced in the *Railway Age* of May 6, was born at Stafford, Mo., on December 22, 1866. Mr. Melton entered railroad service in March, 1884, as an agent and telegrapher for the St. Louis-San Francisco, and was promoted to chief clerk to the division super-

intendent on December 8, 1897. Later Mr. Melton went with the Wabash in the same capacity, and on May 1, 1902, joined the staff of the Denver & Rio Grande Western as chief clerk to the general superintendent. On May 10, 1903, he transferred to the Colorado & Southern as a car accountant, and three years later he went with the Cincinnati, New Orleans & Texas Pacific (part of the Southern) as an assistant trainmaster. Mr. Melton was appointed superintendent of telegraph and telephone of the Southern, Western lines, with headquarters at Cincinnati, Ohio, on August 26, 1906.

Alfred Huger Johnson, whose appointment as superintendent of telegraph and telephone of the Western lines of the Southern, with headquarters at Cincinnati, Ohio, was announced in the *Railway Age* of May 6, was born at Charleston, S. C., on December 2, 1896. Mr. Johnson attended Clemson A. & M. College, graduating in 1918 with a bachelor of science degree in electricity. Immediately after graduation, he entered the United States Navy steam engineering school and was commissioned an ensign. In 1919, he entered the service of the Southern Bell Telephone & Telegraph Company at Charleston, S. C., but left shortly to join the Brill Electric Company in the electrical contracting business in Spartanburg, S. C. Subsequently he worked with the American Telephone & Telegraph Company at Denmark, S. C., as chief equipment attendant; in 1920 he was transferred to the office of the division plant superintendent at Charlotte, N. C. Mr. Johnson entered the service of the Southern as assistant engineer, electrical, in the office of the superintendent of telegraph and telephone at Charlotte, N. C., in November, 1923, and was promoted to telegraph and telephone engineer with headquarters at Washington, D. C., on February 1, 1924. His recent appointment as superintendent of telegraph and telephone of the Western lines at Cincinnati was effective May 1.

W. T. Covert, whose appointment as assistant chief engineer of the Pennsylvania system at Philadelphia, Pa., was announced in the *Railway Age* of May 6, was born on January 4, 1873, at Philadelphia, Pa. He was graduated from the Pierce School of Business, Philadelphia, and from Cooper Institute, New York. Mr. Covert entered railway service in May, 1890, as a clerk in the accounting department of the Pennsylvania at Philadelphia and until October 3, 1895, was rodman on that road and served in various capacities in connection with construction work under the engineer maintenance of way of the United Railroads of New Jersey. From the latter date until June, 1897, he was in the office of the principal assistant engineer of the Pennsylvania at Altoona, Pa. He then became assistant supervisor of the Philadelphia division at Paoli, which position he held until July, 1900, serving successively from that date until October 25, 1917, as supervisor on the Renovo division, supervisor of the Philadelphia yard, assistant engineer of the Chautauqua division, assistant engineer on the Eastern & Susquehanna division and

division engineer on the Philadelphia Terminal division. On October 25, 1917, Mr. Covert was appointed principal assistant engineer of the Western Pennsylvania division at Pittsburgh, Pa., and on March 1, 1920, he became engineer maintenance of way of the Western Pennsylvania division, with headquarters at Pittsburgh, Pa. He was appointed chief engineer, maintenance of way, of the Eastern region on June 1, 1926, the position he held until his recent appointment as assistant chief engineer of the system.

C. S. Weatherill, whose promotion to chief engineer of the Minneapolis & St. Louis, with headquarters at Minneapolis, Minn., was announced in the *Railway Age* of April 1, was born at Newburg, Minn., on August 26, 1891, and graduated in



C. S. Weatherill

civil engineering from the University of Minnesota in 1915. Mr. Weatherill entered the service of the M. & St. L. in April, 1916, as an instrumentman and in January, 1917, he was promoted to assistant engineer. Ten years later he was advanced to supervisor of track, with headquarters at Estherville, Iowa, and on November 1, 1929, he was promoted to supervisor of bridges and buildings, with headquarters at Ft. Dodge, Iowa. In June, 1933, he was appointed supervisor of track, with headquarters at Oskaloosa, Iowa, and in November of that year he was advanced to supervisor of bridges and buildings of the Eastern division, with the same headquarters. Mr. Weatherill was further advanced to division engineer, with headquarters at Oskaloosa on October 1, 1936, and on January 16, 1937, he was promoted to engineer, maintenance of way, with headquarters at Minneapolis, the position he held until his recent promotion, which was effective April 1.

Henry H. Garrigues, whose appointment as chief engineer of maintenance of way of the Eastern region of the Pennsylvania at Philadelphia was announced in the *Railway Age* of May 6, was born on September 4, 1881, at Harrisburg, Pa. He was educated at Haverford School and Haverford College, and entered the service of the Pennsylvania on February 18, 1901, on the Belvidere division at Lambertville, N. J. On March 21, 1903, he was transferred to the Philadelphia division as a rodman and on September 2

Continued on next left-hand page



ELIMINATION of valve and cylinder blows is a very important factor in any fuel conservation program.

Application of HUNT-SPILLER *Air Furnace* GUN IRON wear-resisting parts in the valves and cylinders has solved this problem on many railroads.

The savings in fuel plus the savings in maintenance costs make every locomotive equipped a better revenue producer.

H S G I

Reg. U.S. Trade Mark

Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings
Crosshead Shoes
Hub Liners
Shoes and Wedges
Floating Rod Bushings

Finished Parts

Dunbar Sectional Type Packing
Duplex Sectional Type Packing
for Cylinders and Valves
(Duplex Springs for Above
Sectional Packing)
Cylinder Snap Rings
Valve Rings All Shapes
Light Weight Valves
Cylinder Liners and Pistons
for Diesel Service

HUNT-SPILLER MFG. CORPORATION

V.W. Ellet Pres. & Gen. Mgr. /

E.J. Fuller Vice-President

Office & Works

333 Dorchester Ave.

South Boston, Mass.

Canadian Representative: Joseph Robb & Co., Ltd., 5575 Cote St. Paul Rd., Montreal, P. Q.

Export Agent for Latin America:

International Rwy. Supply Co., 30 Church Street, New York, N. Y.

**HUNT-SPILLER
GUN IRON**

Air Furnace

of the same year he went to Altoona, Pa., as a transitman. He was assistant supervisor at Altoona, Pitcairn, Pa., and Perryville, Md., from January, 1904, to December 1, 1908. On the latter date he be-



Henry H. Garrigues

came supervisor at Kittanning, Pa., and from 1912 to 1914 served as supervisor of the West Jersey & Seashore and in the office of the general manager. On January 1, 1915, he was appointed pilot engineer at Philadelphia and during 1917 was supervisor of the Baltimore and Philadelphia divisions, becoming acting division engineer in December, 1917. In May, 1918, Mr. Garrigues became division engineer of the Trenton division and was transferred in the same capacity to the Philadelphia Terminal division in 1919, becoming engineer of maintenance of way of the Southern division in March, 1920. Two months later he was appointed superintendent of the Delaware division, and was later transferred in the same capacity to the Atlantic and Camden Terminal divisions, the Philadelphia and Camden Ferry, and the Philadelphia Terminal division. Mr. Garrigues was promoted to general superintendent of the Illinois division at Chicago on October 24, 1923. Upon reorganization of the operating department, Mr. Garrigues was appointed superintendent of the Cleveland and Pittsburgh division at Cleveland, Ohio, on January 16, 1924. He became general superintendent of the Eastern Pennsylvania division at Harrisburg, Pa., on January 1, 1926, being transferred in the same capacity to the Central Pennsylvania division at Williamsport, Pa., on July 1, 1933, the position he held until his recent appointment as chief engineer of maintenance of way of the Eastern region.

MECHANICAL

W. D. Quarles has been appointed general mechanical instructor of the Atlantic Coast Line, with system jurisdiction, at Rocky Mount, N. C. **O. A. Wallace** has been appointed general car foreman, with headquarters at Wilmington, N. C.

S. J. Fuller, mechanical draftsman on the St. Louis Southwestern at Pine Bluff, Ark., has been promoted to general car foreman, with the same headquarters, suc-

ceeding **George S. Beaumont**, whose death on April 17 is announced elsewhere in these columns.

PURCHASES AND STORES

C. I. Caswell has been appointed division storekeeper of the Saratoga and Champlain divisions of the Delaware & Hudson, with headquarters at Colonie, N. Y., succeeding **M. W. Farrell**, deceased.

James C. Kirk, whose promotion to assistant purchasing agent of the Chicago, Rock Island & Pacific, with headquarters at Chicago, was announced in the *Railway Age* of May 6, was born at Storm Lake, Iowa, on December 1, 1884, and entered railway service in 1904 with the Minneapolis & St. Louis. Later in the same year, Mr. Kirk left the M. & St. L. to go with the Rock Island. After serving for a short time as a laborer in the stores department, he was made a clerk and in September, 1907, he was promoted to district storekeeper at Shawnee, Okla. Three years later he was transferred to Silvis, Ill., and on May 1, 1920, he was advanced to assistant general storekeeper. He was promoted to



James C. Kirk

general storekeeper, with headquarters at Silvis, on January 1, 1938, the position he held until his recent advancement which was effective May 1. Mr. Kirk has taken an active part in the work of the purchases and stores division of the Association of American Railroads, and has served as chairman of numerous committees, including the Committee on Material Classification and the Committee on Scrap Handling, Classification and Sale. At the present time, he is a member of the General Committee.

SPECIAL

C. L. Brockett, chief clerk to the chief operating officer of the Chicago, Rock Island & Pacific, with headquarters at Chicago, has been appointed supervisor of contracts, a newly created position, with the same headquarters. Mr. Brockett will have charge of all matters pertaining to contracts and joint facilities.

OBITUARY

Thomas H. White, who retired in 1922 as chief engineer of construction of the Western lines of the Canadian National,

with headquarters at Vancouver, B. C., died at that point on March 20, at the age of 92. Mr. White was active for many years in early construction on the Canadian Pacific and the Canadian National.

George S. Beaumont, general car foreman of the St. Louis Southwestern, with headquarters at Pine Bluff, Ark., died at that point on April 17.

George E. Fetterman, industrial agent of the Pennsylvania, with headquarters at Philadelphia, Pa., died on May 6 in the Misericordia hospital, at the age of 60.

Robert J. James, who retired the latter part of 1937 as general baggage agent of the Chicago & North Western, with headquarters at Chicago, died at his home in Evanston, Ill., on May 6.

John F. Anderson, assistant general freight agent of the Chicago, Rock Island & Pacific, with headquarters at Chicago, died suddenly on May 8, at his home in Blue Island, Ill.

John E. Kissell, division engineer on the Cleveland, Cincinnati, Chicago & St. Louis (Big Four), with headquarters at Bellefontaine, Ohio, died suddenly at that point on May 8.

James L. Lunsford, trainmaster on the Southern, with headquarters at Knoxville, Tenn., died on March 22 from a heart attack while riding a train bound for Asheville, N. C. He was 59 years old and had been employed by the Southern for 32 years.

Frank B. Seymour, who retired in 1934, as president of the Green Bay & Western, died at his home in Green Bay, Wis., on May 6. Mr. Seymour was born at Watertown, N. Y., on October 5, 1856, and entered railway service in 1871, as a water boy on the construction of the Green Bay & Lake Pepin (now Green Bay & Western). He later served as a brakeman and conductor and in 1887 he was promoted to assistant superintendent. Four years later he was advanced to general superintendent and in 1910 to general manager. Mr. Seymour was elected president of the Green Bay & Western in 1923.

Jacob G. Hollenbeck, who retired on May 1 as assistant passenger traffic manager on the Missouri Pacific Lines, with headquarters at St. Louis, died at the age of 72 in that city on May 2, following a short illness. Mr. Hollenbeck entered railway service in 1886 in the traffic office of the Cleveland, Cincinnati, Chicago & St. Louis (Big Four) at Indianapolis, Ind., and later served successively the Indianapolis, Decatur & Springfield (now part of the Baltimore & Ohio), the Florida East Coast and the Louisville & Nashville. In 1907, he went with the Missouri Pacific as general agent, passenger department at Cincinnati, Ohio, and was later promoted to assistant general passenger agent at Little Rock, Ark. In January, 1913, Mr. Hollenbeck was transferred to St. Louis and in July, 1926, he was promoted to assistant passenger traffic manager, the position he held at the time of his retirement.